

# **STIC Search Report**

## **Biotech-Chem Library**

**STIC Database Tracking Number: 129593**

**TO: John Pak**  
**Location: 4a25 / 4c70**  
**Thursday, August 19, 2004**  
**Art Unit: 1616**  
**Phone: 272-0620**  
**Serial Number: 09 / 886663**

**From: Jan Delaval**  
**Location: Biotech-Chem Library**  
**Rem 1A51**  
**Phone: 272-2504**

**jan.delaval@uspto.gov**

### **Search Notes**



129593

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For JAN

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☐ TC 3600    ☐ TC 3700    ☐ Design2900    ☐ Law Lib    ☐ Other

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Mailroom  
4C70

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Class / Subclass(es)

Earliest Priority Filing Date:

Jan 8/19/04

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### Provide detailed information on your search topic:

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- Include synonyms, keywords, and acronyms. Define terms that have special meanings.
- **\*For Chemical Structure Searches Only\***  
Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers
- **\*For Sequence Searches Only\***  
Include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.
- **\*For Foreign Patent Family Searches Only\***  
Include the country name and patent number.
- Provide examples or give us relevant citations, authors, etc., if known.
- FAX or send the **abstract, pertinent claims** (not all of the claims), **drawings, or chemical structures** to your EIC or branch library.

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(FILE 'MEDLINE' ENTERED AT 07:34:29 ON 19 AUG 2004)  
DEL HIS

FILE 'HCAPLUS' ENTERED AT 07:56:09 ON 19 AUG 2004

E SARANGAPANI S/AU  
L1 52 S E3,E4  
E TRUONG Q/AU  
L2 13 S E3,E7,E18,E19  
E ICET/PA,CS  
L3 26 S E3-E17  
L4 10 S L1,L2 AND L3  
L5 81 S L1-L3  
L6 12 S L5 AND NOBLE METALS+NT/CT  
L7 1 S L5 AND NOBLE METALS+OLD,PFT,RT/CT  
L8 12 S L6,L7  
L9 1 S L8 AND ANTIBACT?  
E CHEMICAL WARFARE/CT  
L10 3248 S E4-E7  
E E4+ALL  
L11 4484 S E2+NT  
L12 80160 S E2+OLD,NT,PFT,RT  
E E8+ALL  
L13 63702 S E2+OLD,NT,PFT,RT  
E E1+ALL  
L14 118854 S E1,E2,E4-E6,E16-E19,E25-E28,E30-E37,E44-E89  
L15 188349 S E1+NT  
E E90+ALL  
L16 6735 S E1+NT  
E TOXIN/CT  
E E8+ALL  
L17 258767 S E2+OLD,NT,PFT,RT  
L18 89049 S E56+OLD,NT,PFT,RT OR E57+OLD,NT,PFT,RT  
L19 374765 S L10-L18  
E HAZARDOUS MATERIALS/CT  
L20 4314 S E3-E20  
E E3+ALL  
L21 872 S E1  
E E2+ALL  
L22 64291 S E2,E4,E5,E1+NT  
E E27+ALL  
L23 290418 S E1+NT  
L24 52745 S E28+OLD,NT,PFT,RT  
L25 691910 S L19-L24  
E HAZARDOUS MATERIALS/CT  
E E10+ALL  
L26 8968 S E4,E3+NT  
L27 691910 S L25,L26  
L28 77922 S POLYVINYLALCOHOL OR POLYVINYL ALCOHOL OR POLY() (VINYLALCOHOL  
L29 434 S EVAL(S) COPOLYMER  
L30 1672 S EVAL  
L31 17252 S ETHYLENEVINYLALCOHOL OR ETHYLENEVINYL ALCOHOL OR ETHYLENE() (V  
L32 13187 S L31 AND COPOLYM?  
L33 28255 S ETHYLENEVINYLACETATE OR ETHYLENEVINYL ACETATE OR ETHYLENE() (V  
L34 27099 S L33 AND COPOLYM?  
L35 12226 S EVA  
L36 144261 S POLYURETHANE OR POLY URETHANE OR URETHANE(S) POLYM?  
E POLYURETHANE/CT  
L37 45362 S E119  
L38 46011 S POLYURETHAN?/CT,CW  
L39 24705 S PTFE  
L40 19303 S POLYTETRAFLUOROETHYLENE OR POLYTETRAFLUORO ETHYLENE OR POLY()

L41 0 S LC() (3151A OR 3151 A)  
 L42 0 S LC3151A  
 L43 0 S LC 3151 OR LC3151  
 L44 31182 S (ETHYLENEVINYL OR ETHYLENE VINYL) (S)COPOLYM?

FILE 'REGISTRY' ENTERED AT 08:15:12 ON 19 AUG 2004

L45 1 S 9002-89-5  
 L46 1 S 557-75-5  
 L47 3993 S 557-75-5/CRN AND PMS/CI  
 L48 6 S L47 AND C2H4O AND 1/NC  
 L49 4 S L48 NOT (TRIMER OR ESTER OR TETRAE)  
 L50 4047 S 557-75-5/CRN OR L47  
 L51 11 S L50 AND (CU OR ZN OR FE OR AG OR ZN OR BI OR V OR MO)/ELS  
 L52 6 S L51 AND CU/ELS  
 L53 2 S L52 AND 2/NC  
 L54 1 S 25067-34-9  
 L55 1 S 74-85-1  
 L56 12996 S 74-85-1/CRN  
 L57 387 S L50 AND L56  
 L58 3 S L57 AND 2/NC  
 L59 1 S L57 AND L51  
 L60 0 S L59 AND 3/NC  
 L61 1 S 24937-78-8  
 L62 1969 S (108-05-4 AND 74-85-1)/CRN  
 L63 6 S L62 AND 2/NC  
 L64 15 S L62 AND (CU OR ZN OR FE OR AG OR BI OR V OR MO)/ELS  
 L65 0 S L64 AND 3/NC  
 L66 1 S 9002-84-0  
 L67 1 S 116-14-3  
 L68 4297 S 116-14-3/CRN  
 L69 25 S L68 AND (CU OR ZN OR FE OR AG OR BI OR V OR MO)/ELS  
 L70 4 S L69 AND 2/NC  
 L71 1 S 74-85-1  
 L72 12996 S 74-85-1/CRN  
 L73 2870 S L72 AND C3H6  
 L74 19 S L73 AND 2/NC  
 L75 22 S L73 AND (CU OR ZN OR FE OR AG OR BI OR V OR MO)/ELS  
 L76 0 S L75 AND 2/NC  
 L77 5 S (COPPER OR ZINC OR MOLYBDENUM OR VANADIUM OR IRON)/CN  
 L78 178 S (CU OR ZN OR MO OR V OR FE)/MF NOT (ISOTOPE OR MASS)  
 L79 1 S SILVER/CN  
 L80 51 S AG/MF NOT (ISOTOPE OR MASS)  
 E BISMUTH SUBSALICYLATE/CN  
 L81 1 S E3  
 L82 7 S 14882-18-9/CRN

FILE 'HCAPLUS' ENTERED AT 08:37:19 ON 19 AUG 2004

L83 2 S L53  
 L84 57330 S L45,L46,L49  
 L85 6211 S L58  
 L86 35155 S L61,L63  
 L87 45608 S L66,L67  
 L88 29041 S L74  
 L89 337089 S L28-L44,L84-L88  
 L90 1014142 S L77,L78  
 L91 159581 S L79,L80,L81  
 L92 235 S BISMUTH() (SUBSALICYLATE OR OXYSALICYLATE) OR BASIC BISMUTH SA  
 L93 50185 S L89 AND (L90 OR L91 OR L92 OR COPPER OR ZINC OR MOLYBDENUM OR  
 L94 379 S L93 AND L27  
 L95 14 S L94 AND WARFAR?  
 SEL DN AN 2-6 12  
 L96 6 S L95 AND E1-E18  
 L97 4 S L5 AND L27

L98 6 S L5 AND L28-L44,L84-L88  
 L99 6 S L5 AND L90,L91,L92  
 L100 14 S L97-L99,L9  
       SEL DN AN 1 5 6 7  
 L101 4 S L100 AND E19-E30  
 L102 365 S L94 NOT L95-L101  
 L103 264 S L102 AND (PD<=20000621 OR PRD<=20000621 OR AD<=20000621)  
       SEL DN AN 3 7 10 21 25 31 42 60 62 63 65 67 73 74 76 82 83 97 1  
 L104 26 S L103 AND E31-E108  
 L105 10 S L94 AND TEXTIL?/SC,SX,CW  
 L106 34 S L94 AND COAT?/SC,SX,CW  
 L107 8 S L94 AND ?LAMINAT?  
       E CLOTHING/CT  
       E E3+ALL  
 L108 1 S L94 AND E2,E1+NT  
       E E35+ALL  
 L109 10 S L94 AND E2,E1+NT  
 L110 34 S L94 AND (E30,E1+OLD,NT,PFT,RT OR E31+OLD OR E32+OLD,NT,PFT,RT  
 L111 76 S L94 AND (?FIBR? OR ?FIBER?)  
 L112 113 S L105-L111  
 L113 81 S L112 AND (PD<=20000621 OR PRD<=20000621 OR AD<=20000621)  
       SEL DN AN 2 4-7 9 10 13 14 19 21 24-29 31 33-35 42 46 53 57 79  
 L114 26 S L113 AND E1-E78  
 L115 50 S L9,L96,L101,L104,L114  
 L116 50 S L115 AND L1-L44,L83-L115  
 L117 4 S L116 AND L5  
 L118 46 S L115 NOT L117  
       SEL DN AN 2 5 7 10 12 14-16 18-22 25-28 32 33 36-40 42 43  
 L119 20 S L118 NOT E79-E156  
 L120 24 S L117,L119

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FILE COVERS 1907 - 19 Aug 2004 VOL 141 ISS 8

FILE LAST UPDATED: 18 Aug 2004 (20040818/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L120 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:1001602 HCAPLUS

DN 140:44505

ED Entered STN: 24 Dec 2003

TI Method and composition for forming water impermeable barrier

IN Hessert, James E.; Wallace, D. Daniel; Delong, Jimmy D.; Neef, Charles J.

PA Wallace, Inc., USA  
 SO U.S., 20 pp., Cont.-in-part of U.S. Ser. No. 748,342, abandoned.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC ICM C09K003-00  
 ICS C09K007-02  
 NCL 507225000; 507209000; 507211000; 507214000; 507215000; 507216000;  
 507224000; 507229000; 507903000  
 CC 51-2 (Fossil Fuels, Derivatives, and Related Products)  
 Section cross-reference(s): 38, 61  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6667279	B1	20031223	US 1997-969680	19971113 <--
PRAI	US 1996-748342	B2	19961113	<--	

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6667279	ICM	C09K003-00
	ICS	C09K007-02
	NCL	507225000; 507209000; 507211000; 507214000; 507215000; 507216000; 507224000; 507229000; 507903000

AB The swellable polymer gel composition for use in subterranean formations comprises water, a water soluble polymer, a water soluble crosslinking system and a swelling agent. The crosslinking system may be either a redox system or a chelating system. The amts. of the polymer and the crosslinking system are effective to form a substantially uniformly reacted tri-dimensional gel structure. A swelling agent is added to the gel solution in an amount sufficient to increase the volume of the gel a predetd.

percentage. The swelling agent may be a natural or a synthetic agent. A strengthening agent may be added to increase the gel strength of the composition. The composition has numerous uses and is particularly useful in oil

industry applications such as plugging wells, sealing casing leaks and reducing water production from water-bearing hydrocarbon formations. The composition is economically produced, preserves the wellbore for future reentry in plugging operations, inhibits corrosion of casing by the hydration of water, inhibits the leaching of hazardous metal into the environment, and continuously expands in the presence of water.

ST well treatment fluid water impermeable barrier formation polymer

IT Chromates

RL: NUU (Other use, unclassified); USES (Uses)

(alkali metal, crosslinking agent; method and composition for forming water impermeable barrier in oil and gas wells)

IT Phosphates, uses

RL: NUU (Other use, unclassified); USES (Uses)

(chelating agent; method and composition for forming water impermeable barrier in oil and gas wells)

IT Alkali metal oxides

RL: NUU (Other use, unclassified); USES (Uses)

(chromium oxides, crosslinking agent; method and composition for forming water impermeable barrier in oil and gas wells)

IT **Water pollution**

(control; method and composition for forming water impermeable barrier in oil and gas wells)

IT Acrylic polymers, uses

Polysaccharides, uses

RL: NUU (Other use, unclassified); USES (Uses)

(encapsulation material; method and composition for forming water impermeable barrier in oil and gas wells)

IT Sand

- RL: NUU (Other use, unclassified); USES (Uses)  
(finely divided natural; proppant; method and composition for forming water impermeable barrier in oil and gas wells)
- IT Plastics, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(finely divided particles; proppant; method and composition for forming water impermeable barrier in oil and gas wells)
- IT Cottonseed  
(hulls; proppant; method and composition for forming water impermeable barrier in oil and gas wells)
- IT Transition metals, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(ions; method and composition for forming water impermeable barrier in oil and gas wells)
- IT Geological structures (subsurface)  
Natural gas wells  
Oil wells  
Well treatment fluids  
(method and composition for forming water impermeable barrier in oil and gas wells)
- IT Clays, uses  
Diatomite  
Natural **fibers**  
Synthetic **fibers**  
RL: NUU (Other use, unclassified); USES (Uses)  
(proppant; method and composition for forming water impermeable barrier in oil and gas wells)
- IT Nut (seed)  
(shells, ground; proppant; method and composition for forming water impermeable barrier in oil and gas wells)
- IT Gelatins, uses  
Sulfobetaines  
RL: NUU (Other use, unclassified); USES (Uses)  
(swelling agent; method and composition for forming water impermeable barrier in oil and gas wells)
- IT 50-21-5D, Lactic acid, derivs. 64-19-7D, Acetic acid, derivs.  
77-92-9D, Citric acid, derivs. 87-69-4D, Tartaric acid, derivs.  
139-13-9D, Nitrilotriacetic acid, derivs. 526-95-4D, Gluconic acid, derivs.  
20499-58-5, Metaphosphite 634922-32-0, Metaphosphorous acid (H3P3O6)  
RL: NUU (Other use, unclassified); USES (Uses)  
(chelating agent; method and composition for forming water impermeable barrier in oil and gas wells)
- IT 7788-98-9, Ammonium chromate 7789-09-5, Ammonium dichromate 9003-04-7, Polyacrylic acid, sodium salt 10588-01-9, Sodium dichromate 15543-40-5, Zirconium ion(4+), uses 16043-45-1, Titanium ion (Ti4+), uses 16065-83-1, Chromium ion(3+), uses **20074-52-6**, **Ferric** ion, uses 22537-23-1, Aluminum ion, uses 22537-50-4, Tin ion(4+), uses 60676-90-6, Zirconium lactate  
RL: NUU (Other use, unclassified); USES (Uses)  
(crosslinking agent; method and composition for forming water impermeable barrier in oil and gas wells)
- IT 502-97-6, Glycolide 9000-07-1, Carrageenan 9003-05-8D, Polyacrylamide, partially hydrolyzed 9004-32-4, Carboxymethyl cellulose sodium salt 9004-34-6, Cellulose, uses 9005-25-8D, Starch, derivs. 15802-18-3D,  $\alpha$ -Cyanoacrylic acid, alkyl derivs, polymers  
RL: NUU (Other use, unclassified); USES (Uses)  
(encapsulation material; method and composition for forming water impermeable barrier in oil and gas wells)
- IT 513-77-9, Barium carbonate 7631-86-9, Silica, uses 7727-43-7, Barium sulfate 9000-01-5, Arabic gum 9002-18-0, Agar 13462-86-7, Barite  
RL: NUU (Other use, unclassified); USES (Uses)  
(proppant; method and composition for forming water impermeable barrier in

- oil and gas wells)
- IT 7772-98-7, Sodium thiosulfate 7783-18-8, Ammonium thiosulfate  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (reducing agent, crosslinking agent; method and composition for forming water impermeable barrier in oil and gas wells)
- IT 62-55-5, Thioacetamide 62-56-6, Thiourea, uses 123-31-9, Hydroquinone, uses 619-67-0, p-Hydrazinobenzoic acid 1313-82-2, Sodium sulfide, uses 5341-61-7, Hydrazine dihydrochloride 7631-90-5, Sodium bisulfite 7681-57-4, Sodium metabisulfite 7720-78-7, **Ferrous** sulfate 7757-83-7, Sodium sulfite 7758-94-3, **Ferrous** chloride 7775-14-6, Sodium hydrosulfite 10117-38-1, Potassium sulfite 10294-66-3, Potassium thiosulfate 14907-13-2, Disulfurous acid, potassium salt 16731-55-8, Potassium metabisulfite 71247-41-1  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (reducing agent; method and composition for forming water impermeable barrier in oil and gas wells)
- IT 9012-76-4, Chitosan  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (swelling agent, encapsulation material; method and composition for forming water impermeable barrier in oil and gas wells)
- IT 56-86-0, L-Glutamic acid, uses 75-21-8, Ethylene oxide, uses 79-06-1, Acrylamide, uses 79-06-1D, Acrylamide, N-alkyl and N,N-dialkyl derivs. 79-10-7, Acrylic acid, uses 88-12-0, uses 97-65-4D, Itaconic acid, mono-N-alkyl derivs. 107-13-1, Acrylonitrile, uses 557-75-5, Vinyl alcohol, uses 868-77-9, 2-Hydroxyethyl methacrylate 9000-69-5, Pectin 9004-61-9, Hyaluronic acid 9005-25-8, Starch, uses 9037-22-3, Amylopectin 11114-20-8,  $\kappa$ -Carrageenan 25085-02-3, Acrylamide sodium acrylate copolymer 31212-13-2, Acrylamide potassium acrylate copolymer  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (swelling agent; method and composition for forming water impermeable barrier in oil and gas wells)
- IT 9003-05-8, Acrylamide homopolymer 9003-06-9, Acrylamide-acrylic acid copolymer 9004-34-6D, Cellulose, ethers 25014-12-4, Methacrylamide homopolymer 26124-23-2, Acrylamide-vinylpyrrolidone copolymer 26659-19-8, Acrylic acid-Methacrylamide copolymer 28501-56-6, Acrylamide-methacrylamide copolymer 38193-60-1, Acrylamide-sodium 2-acrylamido-2-methylpropanesulfonate copolymer 92815-97-9  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (water-soluble polymer; method and composition for forming water impermeable barrier in oil and gas wells)

RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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- (2) Almond; US 4552215 A 1985
- (3) Aubert; US 5502267 A 1996 HCAPLUS
- (4) Briscoe; US 4336145 A 1982 HCAPLUS
- (5) Bruning; US 4498539 A 1985 HCAPLUS
- (6) Byerley; US 4267062 A 1981
- (7) Chesney; US 4447267 A 1984 HCAPLUS
- (8) Clampitt; US 3757863 A 1973 HCAPLUS
- (9) Clampitt; US 3921733 A 1975 HCAPLUS
- (10) Crinkelmeyer; US 4102400 A 1978
- (11) Dalrymple; US 5002127 A 1991
- (12) Dobson; US 5514644 A 1996 HCAPLUS
- (13) Dobson; US 5783527 A 1998 HCAPLUS
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- (15) Espenscheid; US 4613631 A 1986 HCAPLUS
- (16) Falk; US 5010954 A 1991 HCAPLUS
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- (23) Hessert; US 4068720 A 1978 HCAPLUS
- (24) Heymans; US 5002431 A 1991
- (25) Holtmyer; US 5067565 A 1991 HCAPLUS
- (26) Holtmyer; US 5122549 A 1992 HCAPLUS
- (27) Ishido; US 4366284 A 1982 HCAPLUS
- (28) Kajita; US 5476142 A 1995
- (29) Li; US 5364565 A 1994 HCAPLUS
- (30) Mahabadi; US 5487847 A 1996 HCAPLUS
- (31) Mason; US 4463808 A 1984
- (32) Mitchell; US 4793416 A 1988 HCAPLUS
- (33) Mumallah; US 4917186 A 1990 HCAPLUS
- (34) Nimerick; US 3740360 A 1973 HCAPLUS
- (35) Plaisted; US 5165958 A 1992
- (36) Ryan; US 5476543 A 1995 HCAPLUS
- (37) Ryles; US 4746687 A 1988 HCAPLUS
- (38) Sandiford; US 4009755 A 1977 HCAPLUS
- (39) Sandiford; US 4069869 A 1978 HCAPLUS
- (40) Sandiford; US 4147211 A 1979
- (41) Sandiford; US 5486312 A 1996 HCAPLUS
- (42) Sydansk; US 5372462 A 1994
- (43) Sydansk; US 5834406 A 1998
- (44) Wu; US 4552217 A 1985 HCAPLUS
- (45) Zetmeir; US 3964923 A 1976 HCAPLUS

IT 20074-52-6, Ferric ion, uses

RL: NUU (Other use, unclassified); USES (Uses)

(crosslinking agent; method and composition for forming water impermeable barrier in oil and gas wells)

RN 20074-52-6 HCAPLUS

CN Iron, ion (Fe<sup>3+</sup>) (8CI, 9CI) (CA INDEX NAME)

Fe<sup>3+</sup>

IT 557-75-5, Vinyl alcohol, uses

RL: NUU (Other use, unclassified); USES (Uses)

(swelling agent; method and composition for forming water impermeable barrier in oil and gas wells)

RN 557-75-5 HCAPLUS

CN Ethenol (9CI) (CA INDEX NAME)

H<sub>2</sub>C=CH-OH

L120 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:734176 HCAPLUS

DN 140:340633

ED Entered STN: 19 Sep 2003

TI Chemical and biological protection and detection in fabrics for protective clothing

AU Schreuder-Gibson, Heidi L.; Truong, Quoc; Walker, John E.; Owens, Jeffery R.; Wander, Joseph D.; Jones, Wayne E., Jr.

CS U.S. Army Natick Soldier Center, SS+TD, Natick, MA, 01760-5020, USA

SO MRS Bulletin (2003), 28(8), 574-578

CODEN: MRSBEA; ISSN: 0883-7694

PB Materials Research Society

DT Journal; General Review

LA English

CC 40-0 (Textiles and Fibers)

- AB A review. Military, firefighter, law enforcement, and medical personnel require high-level protection when dealing with chemical and biol. threats in many environments ranging from combat to urban, agricultural, and industrial. Current protective clothing is based on full barrier protection, such as hazardous materials (HAZMAT) suits, or permeable adsorptive protective overgarments, such as those used by the U.S. military. New protective garment systems are envisioned that contain novel features, such as the capability to selectively block toxic chems., to chemical destroy toxic materials that contact the fabric, and to detect hazardous agents on the surface of the fabric. New technologies being built into advanced fabrics for enhanced chemical and biol. protection include selectively permeable membranes, reactive nanoparticles, reactive nanofibers, biocidal fabric treatments, and conductive-polymer indicators on optical fibers.
- ST review chem biol protection detection fabric protective clothing; hazardous material fabric protective clothing review
- IT **Chemical warfare agents**  
**Health hazard**  
 Textiles  
 (chemical and biol. protection and detection in fabrics for protective clothing against hazardous materials)
- IT Safety devices  
 (chemical protective clothing; chemical and biol. protection and detection in fabrics for protective clothing against hazardous materials)
- IT Clothing  
 (chemical protective; chemical and biol. protection and detection in fabrics for protective clothing against hazardous materials)
- IT Safety devices  
 (protective clothing; chemical and biol. protection and detection in fabrics for protective clothing against hazardous materials)
- IT Clothing  
 (protective; chemical and biol. protection and detection in fabrics for protective clothing against hazardous materials)
- IT Nanofibers  
 Nanoparticles  
 (reactive; chemical and biol. protection and detection in fabrics for protective clothing against hazardous materials)
- RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
- RE
- (1) Barisci, J; Sens Actuators, B 2002, V84(2), P252
  - (2) Cepark, V; Chem Mater 1997, V9, P1065
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L120 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:174351 HCAPLUS

DN 138:217807

ED Entered STN: 07 Mar 2003

TI Microarrays and their manufacture by slicing bundled compound-containing fibers

IN Anderson, N. Leigh; Anderson, Norman G.; Braatz, James A.

PA USA

SO U.S. Pat. Appl. Publ., 39 pp., Cont.-in-part of U.S. Ser. No. 628,339.

CODEN: USXXCO

DT Patent

LA English

IC ICM C12Q001-68

ICS G01N033-53; G01N033-542; C12M001-34

NCL 435007900; 435006000; 435287200

CC 9-1 (Biochemical Methods)

Section cross-reference(s): 15

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003044855	A1	20030306	US 2002-61969	20020125 <--
	US 6713309	B1	20040330	US 2000-482460	20000113 <--
PRAI	US 1999-146653P	P	19990730	<--	
	US 2000-482460	A2	20000113	<--	
	US 2000-628339	A2	20000728		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
US 2003044855	ICM	C12Q001-68	
	ICS	G01N033-53; G01N033-542; C12M001-34	
	NCL	435007900; 435006000; 435287200	
US 2003044855	ECLA	B01J019/00C; G01N033/543H; G01N033/543K	<--
US 6713309	ECLA	B01J019/00C; B01L003/00C2D8; C12Q001/68B10A; G01N033/543H; G01N033/543K	<--

AB Microarrays are prepared by using a sep. fiber for each compound being used in the microarray. The fibers are bundled and sectioned to form a thin microarray that may be glued to a backing.

Antibodies to human serum albumin, transferrin, and haptoglobin were immobilized and crosslinked to Poros G particles. Each of the types of antibody-bearing particles plus particles free of antibodies was mixed with melted agarose and a different food coloring and sucked into a length of 1 mm diameter plastic tubing and gelled into rods. The rods were laid into an aluminum channel with more melted agarose to form an array of parallel rods embedded in a square cross-section bar of agarose. After the bar gelled, the gel was removed from the mold and transverse sections were prepared by slicing thin slices perpendicular to the axis of the bar and mounted on a glass slide.

- ST microarray manuf slicing bundled **fiber**; immobilized antibody  
agarose rod bundle slice microarray
- IT Antibodies and Immunoglobulins  
RL: ARG (Analytical reagent use); DEV (Device component use); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)  
(IgG, immobilized antibodies to, of human and rat; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Gels  
(agent in; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Synthetic polymeric **fibers**, uses  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(alginate, **fibers** of heterogeneous matrix containing; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Rat  
(antibodies to IgG of human and; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Particles  
(as solid phases immobilizing agents and embedded in **fibers** of bundle; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Antibodies and Immunoglobulins  
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(autoantibodies, to mitochondrial or lysosomal proteins; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Analysis  
(binding assay; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Antibodies and Immunoglobulins  
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(conjugates, with horseradish peroxidase; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Glass, uses  
RL: ARG (Analytical reagent use); DEV (Device component use); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)  
(controlled pore, with immobilized omniconal antibodies; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Concentration (condition)  
(different **fibers** containing agent at different; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Colloids  
Hydrogels  
(**fibers** of heterogeneous matrix containing; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Clays, uses  
Glass **fibers**, uses  
Plastics, uses  
Waxes

- RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (**fibers** of heterogeneous matrix containing; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Immunoassay  
 (fluorescence; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Cell  
 (fraction immobilized in or on **fiber** of bundle; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Polymers, preparation  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
 (gelling, in immobilization of agents and formation of **fibers**; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Streptococcus pyogenes  
 (group A, cloning and replica plating in glass capillary arrays; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Haptoglobin  
 Transferrins  
 RL: ANT (Analyte); ANST (Analytical study)  
 (immobilized antibodies to human; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Animal cell  
 Microorganism  
 Organelle  
 Plant cell  
 (immobilized in or on **fiber** of bundle; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT **Antigens**  
 Macromolecular compounds  
 Nucleic acids  
 Polysaccharides, uses  
 Receptors  
 RL: ARG (Analytical reagent use); DEV (Device component use); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)  
 (immobilized in or on **fiber** of bundle; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Antibodies and Immunoglobulins  
 Ligands  
 RL: ARG (Analytical reagent use); DEV (Device component use); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)  
 (immobilized, in or on **fiber** of bundle; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Carbohydrates, uses  
 DNA  
 Lipids, uses  
 Oligonucleotides  
 Peptides, uses  
 Proteins  
 RL: ARG (Analytical reagent use); DEV (Device component use); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)  
 (immobilized; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Lysosome  
 Mitochondria  
 (impregnation in JB-4 resin; microarrays and their manufacture by slicing bundled compound-containing **fibers**)

IT Sonication  
(in dispersion of immobilized antibodies in methacrylate polymer;  
microarrays and their manufacture by slicing bundled compound-containing  
**fibers**)

IT Casting process  
Liquids  
Polymerization  
(in immobilization of agents and formation of **fibers**;  
microarrays and their manufacture by slicing bundled compound-containing  
**fibers**)

IT Blood analysis  
Cutting  
Diagnosis  
Drug screening  
Human  
Hybridoma  
Microarray technology  
Protein microarray technology  
(microarrays and their manufacture by slicing bundled compound-containing  
**fibers**)

IT **Polyurethanes, uses**  
RL: NUU (Other use, unclassified); USES (Uses)  
(microarrays and their manufacture by slicing bundled compound-containing  
**fibers**)

IT Proteins  
RL: BSU (Biological study, unclassified); DEV (Device component use); DGN  
(Diagnostic use); TEM (Technical or engineered material use); BIOL  
(Biological study); USES (Uses)  
(mitochondrial or lysosomal, detection of autoantibodies to;  
microarrays and their manufacture by slicing bundled compound-containing  
**fibers**)

IT Antibodies and Immunoglobulins  
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP  
(Preparation)  
(monoclonal, glass capillary arrays in selection of; microarrays and  
their manufacture by slicing bundled compound-containing **fibers**)

IT Urine analysis  
(of Escherichia coli of patient urine; microarrays and their manufacture by  
slicing bundled compound-containing **fibers**)

IT Immobilization, molecular or cellular  
(of agents in or on **fibers** of bundle; microarrays and their  
manufacture by slicing bundled compound-containing **fibers**)

IT Escherichia coli  
(of patient urine, rapid testing of antibiotic sensitivity of;  
microarrays and their manufacture by slicing bundled compound-containing  
**fibers**)

IT Antibodies and Immunoglobulins  
RL: ARG (Analytical reagent use); DEV (Device component use); TEM  
(Technical or engineered material use); ANST (Analytical study); USES  
(Uses)  
(omniconal, immobilized on control pore glass; microarrays and their  
manufacture by slicing bundled compound-containing **fibers**)

IT Dyes  
(on **fiber** of bundle; microarrays and their manufacture by slicing  
bundled compound-containing **fibers**)

IT **Porous materials**  
(particulate, agent immobilized in; microarrays and their manufacture by  
slicing bundled compound-containing **fibers**)

IT Gelation agents  
(polymer, in immobilization of agents and formation of **fibers**  
; microarrays and their manufacture by slicing bundled compound-containing  
**fibers**)

IT Particles

- (porous, agent immobilized in; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Antibiotics  
(sensitivity testing; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Blood serum  
(serum albumin and transferrin and haptoglobin subtraction from; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Albumins, analysis  
RL: ANT (Analyte); ANST (Analytical study)  
(serum, immobilized antibodies to human; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Holders  
(sliced bundle of **fibers** mounting on; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Glass, uses  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(slides as support for diagnostic array for detecting autoantibodies; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Organic compounds, uses  
RL: ARG (Analytical reagent use); DEV (Device component use); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)  
(small, immobilized; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Fluoropolymers, biological studies  
RL: ARG (Analytical reagent use); DEV (Device component use); DGN (Diagnostic use); TEM (Technical or engineered material use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(tubing, containing mitochondria or lysosomes embedded in JB-4 resin; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT **Fibers**  
RL: ARG (Analytical reagent use); DEV (Device component use); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)  
(with immobilized agents; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Microspheres  
(with immobilized antibodies, microarray of polymethacrylate **fibers** containing; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT Macroglobulins  
RL: ARG (Analytical reagent use); DEV (Device component use); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)  
( $\alpha$ 2-, immobilized omniconal antibodies to human serum albumin or to; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT 282542-78-3, ImmunoBed  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(as embedding material for immobilized antibodies; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT 500777-49-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(biotinylated anti-IgG immobilization in columns containing beads of; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT 9003-05-8, Polyacrylamide

- RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(embedding of monoclonal antibodies immobilized on control pore glass; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT 9004-54-0, Dextran, uses  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(**fibers** of heterogeneous matrix containing; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT 25087-26-7, Polymethacrylic acid  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(**fibers**; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT 58-85-5D, Biotin, conjugates with anti-IgG  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(immobilization on UltraLink Immobilized Streptavidin Plus beads in columns; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT 36875-25-9, Dimethylpimelimidate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(in antibody immobilization on Poros G particles; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT 72-57-1, Trypan blue 7262-41-1, Fluorescein acetate  
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(in rapid testing of antibiotic sensitivity of Escherichia coli of patient urine; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT 500780-77-8DP, Poros G, reaction products with antibodies  
RL: ARG (Analytical reagent use); DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); ANST (Analytical study); PREP (Preparation); USES (Uses)  
(microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT 9003-99-0D, Peroxidase, conjugates with goat anti-human globulin  
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT 122157-68-0, JB 4  
RL: ARG (Analytical reagent use); DEV (Device component use); DGN (Diagnostic use); TEM (Technical or engineered material use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(mitochondria or lysosomes embedded in; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT 111-30-8, Glutaraldehyde  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(mitochondria or lysosomes fixed with; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT 9012-36-6, Agarose  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(plastic tubing embedded in agarose and containing antibody-bearing particles mixed with food coloring and; microarrays and their manufacture by slicing bundled compound-containing **fibers**)
- IT 60-54-8, Tetracycline 67-20-9, Nitrofurantoin 69-53-4, Ampicillin 87-08-1, Penicillin V 114-07-8, Erythromycin 144-82-1, Sulfamethiazole 738-70-5, Trimethoprim 53994-73-3, Cefaclor 82419-36-1, Ofloxacin  
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);



THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(rapid testing of sensitivity to, of Escherichia coli of patient urine;  
microarrays and their manufacture by slicing bundled compound-containing  
fibers)

IT 25608-33-7

RL: ARG (Analytical reagent use); DEV (Device component use); TEM  
(Technical or engineered material use); ANST (Analytical study); USES  
(Uses)

(tubes of immobilized antibodies embedding in; microarrays and their  
manufacture by slicing bundled compound-containing fibers)

IT 9002-84-0, Teflon

RL: ARG (Analytical reagent use); DEV (Device component use); DGN  
(Diagnostic use); TEM (Technical or engineered material use); ANST  
(Analytical study); BIOL (Biological study); USES (Uses)

(tubing, containing mitochondria or lysosomes embedded in JB-4 resin;  
microarrays and their manufacture by slicing bundled compound-containing  
fibers)

IT 500769-36-8

RL: ARG (Analytical reagent use); DEV (Device component use); TEM  
(Technical or engineered material use); ANST (Analytical study); USES  
(Uses)

(with immobilized antibody; microarrays and their manufacture by slicing  
bundled compound-containing fibers)

IT 9002-84-0, Teflon

RL: ARG (Analytical reagent use); DEV (Device component use); DGN  
(Diagnostic use); TEM (Technical or engineered material use); ANST  
(Analytical study); BIOL (Biological study); USES (Uses)

(tubing, containing mitochondria or lysosomes embedded in JB-4 resin;  
microarrays and their manufacture by slicing bundled compound-containing  
fibers)

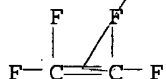
RN 9002-84-0 HCAPLUS

CN Ethene, tetrafluoro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 116-14-3

CMF C2 F4



L120 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:444503 HCAPLUS

DN 137:24321

ED Entered STN: 13 Jun 2002

TI Active topical skin protectants using reactive nanoparticles

IN Hobson, Stephen T.; Braue, Ernest H., Jr.; Lehnert, Erich K.; Klabunde,  
Kenneth J.; Koper, Olga P.; Decker, Shawn

PA United States Dept. of the Army, USA; Nanoscale Materials, Inc.

SO U.S., 13 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM A61K031-02

ICS A61K031-08; A61K047-00; A61K007-42

NCL 514759000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6403653	B1	20020611	US 2001-871747	20010601 <--
	US 6410603	B1	20020625	US 2001-871744	20010601 <--
	US 6410604	B1	20020625	US 2001-871749	20010601 <--
	US 6414039	B1	20020702	US 2001-871746	20010601 <--
	US 6420434	B1	20020716	US 2001-872096	20010601 <--
	US 6437005	B1	20020820	US 2001-871745	20010601 <--
	US 6472437	B1	20021029	US 2001-871743	20010601 <--
	US 6472438	B1	20021029	US 2001-872095	20010601 <--
PRAI	US 2000-209337P	P	20000602	<--	

## CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	US 6403653	ICM	A61K031-02
		ICS	A61K031-08; A61K047-00; A61K007-42
		NCL	514759000
AB	A topical skin protectant formulation containing a barrier cream and an active moiety for protecting warfighters and civilians against all types of harmful chems., specifically chemical warfare agents (CWA's) is claimed. The topical skin protectant offers a barrier property and an active moiety that serves to neutralize chemical warfare agents into less toxic agents. A topical skin protectant formulation contained Aerogel TiO2 3, poly(tetrafluoroethylene) 47, and perfluorinated polyether oil 50%. The above cream showed the greatest protection against soman vapor reducing the amount of soman by 99%.		
ST	topical skin protectant nanoparticle chem warfare agent		
IT	<b>Chemical warfare agents</b> Nanoparticles Stabilizing agents Sunscreens Surfactants (active topical skin protectants using reactive nanoparticles)		
IT	Alkaline earth oxides Oxides (inorganic), biological studies Transition metal oxides RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (active topical skin protectants using reactive nanoparticles)		
IT	Fluoropolymers, biological studies RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (active topical skin protectants using reactive nanoparticles)		
IT	<b>Cosmetics</b> (barrier creams; active topical skin protectants using reactive nanoparticles)		
IT	<b>Chemical warfare agents</b> (nerve gases, G class; active topical skin protectants using reactive nanoparticles)		
IT	Drug delivery systems (ointments, creams; active topical skin protectants using reactive nanoparticles)		
IT	Rare earth metals, biological studies RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (oxides; active topical skin protectants using reactive nanoparticles)		
IT	Polyethers, biological studies RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (perfluoro; active topical skin protectants using reactive nanoparticles)		
IT	Organic compounds, biological studies RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (phosphorus-containing; active topical skin protectants using reactive nanoparticles)		

IT Fluoropolymers, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (polyether-, perfluoro; active topical skin protectants using reactive nanoparticles)

IT Drug delivery systems  
 (topical; active topical skin protectants using reactive nanoparticles)

IT 96-64-0, Soman. 505-60-2, Sulfur mustard  
 50782-69-9, VX.  
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
 (active topical skin protectants using reactive nanoparticles)

IT 1305-78-8, Calcium oxide, biological studies 1306-38-3, Cerium oxide, biological studies 1309-48-4, Magnesium oxide, biological studies 1314-13-2, Zinc oxide, biological studies 13463-67-7, Titanium oxide, biological studies  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (active topical skin protectants using reactive nanoparticles)

IT 9002-84-0, Poly(tetrafluoroethylene)  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (active topical skin protectants using reactive nanoparticles)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

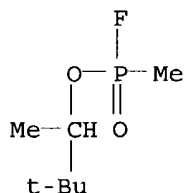
RE

- (1) Arroyo; Jnl of Pharm and Toxicol Methods 1995, V33(2), P109 HCAPLUS
- (2) Jenner; US 6224885 B1 2001 HCAPLUS
- (3) Klabunde; US 5914436 A 1999 HCAPLUS
- (4) Klabunde; US 5990373 A 1999 HCAPLUS
- (5) Koper; US 6057488 A 2000 HCAPLUS
- (6) Marsh; US 4649037 A 1987 HCAPLUS
- (7) McCreery; US 5607979 A 1997 HCAPLUS
- (8) Smith; Jnl of the American Acad of Dermatology, part 1 1995, V32(5), P765

IT 96-64-0, Soman. 505-60-2, Sulfur mustard  
 50782-69-9, VX.  
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
 (active topical skin protectants using reactive nanoparticles)

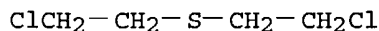
RN 96-64-0 HCAPLUS

CN Phosphonofluoridic acid, methyl-, 1,2,2-trimethylpropyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



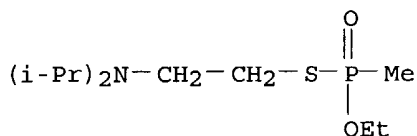
RN 505-60-2 HCAPLUS

CN Ethane, 1,1'-thiobis[2-chloro- (9CI) (CA INDEX NAME)

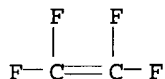


RN 50782-69-9 HCAPLUS

CN Phosphonothioic acid, methyl-, S-[2-[bis(1-methylethyl)amino]ethyl] O-ethyl ester (9CI) (CA INDEX NAME)



IT 9002-84-0, Poly(tetrafluoroethylene)  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (active topical skin protectants using reactive nanoparticles)  
 RN 9002-84-0 HCAPLUS  
 CN Ethene, tetrafluoro-, homopolymer (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 116-14-3  
 CMF C2 F4



L120 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:360095 HCAPLUS  
 DN 136:344857  
 ED Entered STN: 15 May 2002  
 TI Immobilized and polymer-supported metal chelate complexes for catalytic  
 hydrolysis and decontamination of pesticides and chemical warfare  
 nerve agents  
 IN Chang, Eddie L.  
 PA United States Dept. of the Navy, USA  
 SO U. S. Pat. Appl., 36 pp., Avail. NTIS Order No. PAT-APPL-9-862 418.  
 CODEN: XAXXAV  
 DT Patent  
 LA English  
 CC 59-6 (Air Pollution and Industrial Hygiene)  
 Section cross-reference(s): 5, 38, 50, 60

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 862418	A0	20011009	US 2001-862418	20010523
	US 2003054949	A1	20030320		
PRAI	US 2001-862418		20010523		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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US 862418

AB Polymer-supported immobilized metal chelate complexes are synthesized and used as reagents for the adsorption and catalytic hydrolysis of phosphorus-containing esters, especially phosphates, phosphorofluoridates, phosphonates, and phosphorothionates typically encountered as chemical warfare nerve agents and pesticides. These immobilized metal chelate complexes can be in the form of polymers, micelles, liposomes, phospholipids, tubules, and other self-organized assocns. The polymers can be prepared in the presence of a target compound so that the active sites can be molecularly imprinted for better selectivity. Such polymers, which are typically functionalized polyurethanes, acrylates, and vinyl polymers containing ligand groups, can efficiently decontaminate the above phosphorus-containing esters (e.g., methylparathion and 4-nitrophenyl

- phosphate) in a practical and cost-effective manner.
- ST immobilized metal chelate complex hydrolysis pesticide nerve gas; chem warfare agent phosphate ester hydrolysis metal chelate polymer; phospholipid immobilized metal chelate complex hydrolysis pesticide nerve agent; **polyurethane** immobilized metal chelate complex hydrolysis pesticide nerve agent; polyacrylate immobilized metal chelate complex hydrolysis pesticide nerve agent
- IT Polymers, processes  
 RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)  
 (biodegradable, matrix; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical warfare nerve agents)
- IT Liposomes  
 Micelles  
 (catalysts; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical warfare nerve agents)
- IT Lipids, processes  
 RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)  
 (glycerolipids, iminodiacetate derivs., metal complexes; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical warfare nerve agents)
- IT Polymer-supported reagents  
 (immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical warfare nerve agents)
- IT **Polyurethanes, processes**  
 RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)  
 (matrix, biodegradable; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical warfare nerve agents)
- IT Phospholipids, processes  
 RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)  
 (metal chelate derivs.; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical warfare nerve agents)
- IT Hydrolysis catalysts  
 (metal chelates; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical warfare nerve agents)
- IT Chelates  
 RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)  
 (metal; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical warfare nerve agents)
- IT **Chemical warfare agents**  
 (nerve gases, phosphorus-containing, decontamination of; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical warfare nerve agents)
- IT Self-association  
 (of immobilized metal chelates; immobilized and polymer-supported metal

- chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical **warfare** nerve agents)
- IT Hydrolysis  
Hydrolysis kinetics  
(of phosphorus-containing esters; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical **warfare** nerve agents)
- IT **Chemical warfare agents**  
Pesticides  
(phosphorus-containing, decontamination of; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical **warfare** nerve agents)
- IT Amines, processes  
RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)  
(polyamines, nonpolymeric, reaction products, with 2-ethyl-2-(hydroxymethyl)propane trimethacrylate, metal complexes; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical **warfare** nerve agents)
- IT **Polyurethanes, processes**  
RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)  
(reaction products, with nonpolymeric polyamines, matrix, biodegradable; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical **warfare** nerve agents)
- IT 298-00-0, Methyl parathion  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)  
(hydrolysis and decontamination of; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical **warfare** nerve agents)
- IT 107-15-3DP, Ethylene diamine, reaction products with biodegradable **polyurethanes**, metal chelate derivs. 111-40-0DP, Diethylenetriamine, reaction products with biodegradable **polyurethanes**, metal chelate derivs. 1760-24-3DP, N-[3-(Trimethoxysilyl)propyl]ethylenediamine, reaction products with silica, metal complex derivs. 3290-92-4DP, Trimethylolpropane trimethacrylate, reaction products with polyamines, metal chelate derivs. 7447-39-4DP, **Copper** chloride (CuCl<sub>2</sub>), complexes with functionalized polymers 7631-86-9DP, Silica, reaction products with N-[3-(trimethoxysilyl)propyl]ethylenediamine, metal chelate derivs. 13770-18-8DP, **Copper** diperchlorate, complexes with functionalized polymers **15158-11-9DP**, **Copper**(2+), complexes with polymers, processes 377073-41-1DP, Prepol, metal chelate complexes 415919-02-7DP, complexes with **cupric** chloride 415919-09-4DP, complexes with **Cu**(2+) salts 415919-10-7DP, complexes with **Cu**(2+) salts 415919-11-8DP, **copper** (2+) complexes 415919-14-1DP, complexes with **cupric** nitrate 415919-15-2DP, complexes with **cupric** nitrate  
RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)  
(hydrolysis catalysts; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical **warfare** nerve agents)
- IT 7664-38-2D, Phosphoric acid, esters 13537-32-1D, Phosphorofluoridic acid, esters 13598-36-2D, Phosphonic acid, esters 13598-51-1D, Phosphorothioic acid, esters

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)  
 (hydrolysis of; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical **warfare** nerve agents)

IT 330-13-2, 4-Nitrophenyl phosphate 645-15-8, Bis(4-nitrophenyl) phosphate  
 RL: RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)  
 (model phosphate ester, hydrolysis of; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical **warfare** nerve agents)

IT 46734-05-8P, 1,2-Ethanediamine, N-(2-aminoethyl)-N'-[(4-ethenylphenyl)methyl]- 106673-75-0P, 1,2-Ethanediamine, N'-[(4-ethenylphenyl)methyl]- 106673-77-2P, 1,2-Ethanediamine, N-(2-aminoethyl)-N'-[(4-ethenylphenyl)methyl]- 415919-02-7P  
 415919-04-9P 415919-06-1P 415919-08-3P 415919-09-4P 415919-10-7P  
 415919-11-8P 415919-12-9P 415919-13-0P 415919-14-1P 415919-15-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (synthesis of; in preparation of immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical **warfare** nerve agents)

IT 15158-11-9DP, Copper(2+), complexes with polymers, processes  
 RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)  
 (hydrolysis catalysts; immobilized and polymer-supported metal chelate complexes for catalytic hydrolysis and decontamination of pesticides and chemical **warfare** nerve agents)

RN 15158-11-9 HCAPLUS  
 CN Copper, ion (Cu2+) (8CI, 9CI) (CA INDEX NAME)

Cu2+

L120 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:11024 HCAPLUS  
 DN 136:82305  
 ED Entered STN: 04 Jan 2002  
 TI Attachment of biomolecules to surfaces of medical devices for improvement of biocompatibility  
 IN Keogh, James R.; Trescony, Paul V.  
 PA USA  
 SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of U.S. 5,925,552.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC C12N011-00; C12N011-16  
 NCL 435174000  
 CC 9-16 (Biochemical Methods)  
 FAN.CNT 7

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002001834	A1	20020103	US 1999-257543	19990224 <--
	US 6617142	B2	20030909		
	US 5821343	A	19981013	US 1996-635187	19960425 <--
	US 5728420	A	19980317	US 1996-694535	19960809 <--
	US 5891506	A	19990406	US 1997-984922	19971204 <--
	US 5945319	A	19990831	US 1997-1994	19971231 <--
	US 6033719	A	20000307	US 1998-12056	19980122 <--

US 5925552	A	19990720	US 1998-67188	19980427 <--
US 2004086543	A1	20040506	US 2003-620180	20030715 <--
PRAI US 1996-635187	A2	19960425	<--	
US 1996-694535	A2	19960809	<--	
US 1997-984922	A2	19971204	<--	
US 1997-1994	A2	19971231	<--	
US 1998-12056	A2	19980122	<--	
US 1998-67188	A2	19980427	<--	
US 1998-10906	A2	19980122	<--	
US 1999-257543	A1	19990224	<--	

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
US 2002001834	IC	C12N011-00IC	C12N011-16
	NCL	435174000	
US 2002001834	ECLA	A61L027/34; A61L029/08B; A61L031/10	<--
US 5821343	ECLA	A61L027/00K; A61L031/00K; A61L033/00E6; A61L033/00F; A61L033/00H2; A61L033/00H3; A61L033/00R2	<--
US 5891506	ECLA	A61L027/28; A61L027/34; A61L027/34; A61L029/08B; A61L031/08; A61L031/10; A61L031/10; A61L033/00H2F	<--
US 5945319	ECLA	A61L027/24; A61L033/00H2; A61L033/00H3; A61L033/00R2; A61L033/12; A61L033/12R; A61L033/18; A61L027/28; A61L027/34; A61L027/34; A61L029/08B; A61L029/08B; A61L031/08; A61L001/10; A61L031/10; A61L033/00H2F	<--
US 6033719	ECLA	A61L027/34; A61L029/08B; A61L031/10; A61L033/00R2	<--
US 5925552	ECLA	A61L027/24; A61L031/08; A61L031/10; A61L031/10; A61L033/00H3; A61L033/00H2F; A61L033/00H2; A61L033/00R2; A61L033/12; A61L033/12R; A61L033/18; A61L027/28; A61L027/34; A61L029/08B; A61L029/08B	<--
US 2004086543	ECLA	A61L027/28; A61L027/34; A61L027/34; A61L029/08B; A61L031/08; A61L031/10; A61L031/10; A61L033/00H2F; A61L033/00H2; A61L033/00H3; A61L033/00R2; A61L033/12; A61L033/18	<--

AB A method for making a medical device having at least one biomol. immobilized on a substrate surface is provided. One method of the present invention includes immobilizing a biomol. comprising an unsubstituted amide moiety on a biomaterial surface. Another method of the present invention includes immobilizing a biomol. on a biomaterial surface comprising an unsubstituted amide moiety. Still another method of the present invention may be employed to crosslink biomols. comprising unsubstituted amide moieties immobilized on medical device surfaces. Addnl., one method of the present invention may be employed to crosslink biomols. comprising unsubstituted amide moieties in solution, thereby forming a crosslinked biomaterial or a crosslinked medical device coating. A method of forming a coating on a surface of a medical device for improvement of biocompatibility is described. The method comprises steps of: oxidizing a biomol. containing 2-aminoalc. moiety with a periodate to form an aldehyde-functional material, combining the aldehyde-functional material with a biomaterial surface containing a primary amine moiety to immobilize the biomol. on the substrate surface through an imine moiety, and reacting the imine moiety with a reducing agent to form an immobilized biomol. on the biomaterial surface through a sec. amine linkage. Another method of the present invention may be employed to crosslink biomols. immobilized on medical device surfaces. Addnl., one method of the present invention may be employed to crosslink biomols., thereby forming a crosslinked biomaterial or a crosslinked medical device coating. E.g., type IV collagen was oxidized with NaIO<sub>4</sub> and the oxidized collagen was then allowed to form crosslinks, thereby bonding the mols. together through imine moieties formed from an aldehyde moiety of one collagen mol. reacting with an amine moiety of a neighboring collagen mol. The imine linkages were then stabilized by Na cyanoborohydride to form sec. amine linkages. The resultant crosslinked material may be employed as a biomaterial or as a biomaterial coating.



ST attachment biomol device surfaces; biomol immobilization medical device  
prosthetic biocompatibility; peptide protein immobilization medical device  
coating

IT Glycols, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(1,2-, reaction with periodate; attachment of biomols. to surfaces of  
medical devices for improvement of biocompatibility)

IT Dicarbonyl compounds  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(1,2-di, reaction with periodate; attachment of biomols. to surfaces of  
medical devices for improvement of biocompatibility)

IT Platinum-group metals  
RL: DEV (Device component use); USES (Uses)  
(alloy, biocompatible material, use on surface; attachment of biomols.  
to surfaces of medical devices for improvement of biocompatibility)

IT Bromides, reactions  
Chlorides, reactions  
Chlorites  
Hypochlorites  
RL: RGT (Reagent); RACT (Reactant or reagent)  
(amine forming agent; attachment of biomols. to surfaces of medical  
devices for improvement of biocompatibility)

IT Alcohols, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(amino,  $\alpha$ -, reaction with periodate, NaIO<sub>4</sub> oxidation of; attachment  
of biomols. to surfaces of medical devices for improvement of  
biocompatibility)

IT Blood vessel  
(artificial; attachment of biomols. to surfaces of medical devices for  
improvement of biocompatibility)

IT Biocompatibility  
Coating materials  
Coating process  
Immobilization, molecular or cellular  
Medical goods  
Pipes and Tubes  
Prosthetic materials and Prosthetics  
Reducing agents  
(attachment of biomols. to surfaces of medical devices for improvement  
of biocompatibility)

IT Proteins  
RL: BUU (Biological use, unclassified); CPS (Chemical process); PEP  
(Physical, engineering or chemical process); BIOL (Biological study); PROC  
(Process); USES (Uses)  
(attachment, biomol.; attachment of biomols. to surfaces of medical  
devices for improvement of biocompatibility)

IT Bone  
Ceramics  
Skin  
Tooth  
Wood  
(biocompatible material, use on surface; attachment of biomols. to  
surfaces of medical devices for improvement of biocompatibility)

IT Collagens, uses  
Elastins  
Fibrins  
Fluoropolymers, uses  
Glass, uses  
Laminins  
Metals, uses  
Polyamides, uses  
Polycarbonates, uses  
Polyesters, uses

Polyethers, uses  
Polyolefins  
    **Polyurethanes, uses**  
Rubber, uses  
Shape memory alloys  
Silicone rubber, uses  
RL: DEV (Device component use); USES (Uses)  
    (biocompatible material, use on surface; attachment of biomols. to  
    surfaces of medical devices for improvement of biocompatibility)

IT Anti-inflammatory agents  
Antibacterial agents  
Antibiotics  
Anticoagulants  
Antimicrobial agents  
Drugs  
Dyes  
Platelet (blood)  
    (biomol.; attachment of biomols. to surfaces of medical devices for  
    improvement of biocompatibility)

IT Agglutinins and Lectins  
Antibodies and Immunoglobulins  
Antibodies and Immunoglobulins  
    **Antigens**  
Avidins  
Blood-coagulation factors  
Carbohydrates, biological studies  
Cytokines  
DNA  
Enzymes, biological studies  
Fatty acids, biological studies  
    **Fibrinogens**  
Glycoproteins  
Growth factors, animal  
Hormones, animal, biological studies  
Ligands  
Neurotransmitters  
Nucleic acids  
Peptides, biological studies  
Polysaccharides, biological studies  
Proteins  
Proteoglycans, biological studies  
RNA  
    **Toxins**  
Transport proteins  
Vitamins  
Vitronectin  
RL: BUU (Biological use, unclassified); CPS (Chemical process); PEP  
    (Physical, engineering or chemical process); BIOL (Biological study); PROC  
    (Process); USES (Uses)  
    (biomol.; attachment of biomols. to surfaces of medical devices for  
    improvement of biocompatibility)

IT Pumps  
    (blood; attachment of biomols. to surfaces of medical devices for  
    improvement of biocompatibility)

IT Medical goods  
    (catheters; attachment of biomols. to surfaces of medical devices for  
    improvement of biocompatibility)

IT Animal tissue  
Blood  
Body fluid  
    (contacting medical device; attachment of biomols. to surfaces of  
    medical devices for improvement of biocompatibility)

IT Amines, processes

- RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)  
(conversion of amide to, coupling with aldehyde; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Amides, reactions  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(conversion to amine; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Aldehydes, reactions  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(coupling with amine; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Circulation  
(extracorporeal, medical device for; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Proteins  
RL: BUU (Biological use, unclassified); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
(fibrous, biomol.; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Proteins  
RL: BUU (Biological use, unclassified); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
(globular, biomol.; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Functional groups  
(guanidino group, surface containing, formation of; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Proteins  
RL: BUU (Biological use, unclassified); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
(membrane, biomol.; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Heart  
(pacemaker; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Phosphate group  
(reaction with periodate; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Epoxides  
Isocyanates  
Sulfates, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with periodate; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Proteins  
RL: BUU (Biological use, unclassified); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
(regulatory, biomol.; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Carboxylic acids, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(salts, reaction with periodate; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Medical goods  
(stents; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)

- IT Proteins  
RL: BUU (Biological use, unclassified); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
(structural, biomol.; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Bags  
Balloons  
Membranes, nonbiological  
(surface forming; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT **Fibers**  
RL: DEV (Device component use); USES (Uses)  
(surface forming; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Medical goods  
(sutures, surface forming; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Metallic glasses  
RL: DEV (Device component use); USES (Uses)  
(titanium alloy, biocompatible material, use on surface; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Collagens, uses  
RL: DEV (Device component use); USES (Uses)  
(type IV, biocompatible material, use on surface; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Heart  
(valve; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT Medical goods  
(wires; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT 536-80-1, Iodosylbenzene 546-67-8, Lead tetraacetate 2712-78-9, [Bis(trifluoroacetoxy)iodo]benzene 7726-95-6, Bromine, reactions 7782-50-5, Chlorine, reactions 14380-61-1, Hypochlorite 14380-62-2, Hypobromite 14998-27-7, Chlorite 15477-77-7, Bromite 16887-00-6, Chloride, reactions 27126-76-7, Hydroxy(tosyloxy)iodobenzene 111865-47-5, Benzyltrimethylammonium tribromide  
RL: RGT (Reagent); RACT (Reactant or reagent)  
(amine forming agent; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT 1306-06-5, Hydroxyapatite 1344-28-1, Aluminum oxide, uses 7440-06-4, Platinum, uses 7440-22-4D, Silver, carbon coated with 7440-32-6, Titanium, uses 8049-15-8, Elgiloy 8049-28-3, Stellite 9002-84-0, Polytetrafluoroethylene 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9003-01-4, Polyacrylic acid 9003-07-0, Polypropylene 9003-31-0, Polyisoprene 9003-39-8, Polyvinylpyrrolidone 9003-53-6, Polystyrene 9004-34-6, Cellulose, uses 11110-83-1 12597-68-1, Stainless steel, uses  
RL: DEV (Device component use); USES (Uses)  
(biocompatible material, use on surface; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT 58-85-5, Biotin  
RL: BUU (Biological use, unclassified); CPS (Chemical process); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
(biomol.; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)
- IT 67-51-6, 3,5-Dimethylpyrazole 420-04-2, Cyanamide 461-58-5, Dicyandiamide 1071-37-0 1184-90-3, Aminoimino methanesulfonic acid 2440-60-0, O-Methylisourea 2986-19-8, S-Methylisothiurea 13882-28-5

14996-02-2, Hydrogen sulfate, reactions 38184-47-3, 3,5-Dimethyl-1-guanylpurazole nitrate 52328-05-9, O-Methylisouronium sulfate 57538-27-9, 2-Methyl-1-nitroisourea  
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (guanidino forming agent; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)

IT 7440-44-0, Glassy carbon, uses  
 RL: DEV (Device component use); USES (Uses)  
 (pyrolytic or glassy or compressed, biocompatible material, use on surface; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)

IT 13774-81-7 16940-66-2, Sodium borohydride 25895-60-7, Sodium cyanoborohydride  
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (reducing agent; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)

IT 14213-97-9, Borate (BO33-)  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (stabilizing agent; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)

IT 15056-35-6, Periodate  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (use for aldehyde formation; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)

IT 7790-21-8, Potassium periodate 7790-28-5, Sodium periodate 13444-71-8, Periodic acid 15056-35-6D, Periodate, alkali metal  
 RL: RGT (Reagent); RACT (Reactant or reagent)  
 (use for aldehyde formation; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)

IT 7440-22-4D, Silver, carbon coated with 9002-84-0, Polytetrafluoroethylene  
 RL: DEV (Device component use); USES (Uses)  
 (biocompatible material, use on surface; attachment of biomols. to surfaces of medical devices for improvement of biocompatibility)

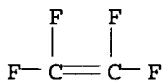
RN 7440-22-4 HCAPLUS  
 CN Silver (8CI, 9CI) (CA INDEX NAME)

Ag

RN 9002-84-0 HCAPLUS  
 CN Ethene, tetrafluoro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 116-14-3  
 CMF C2 F4



L120 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:9866 HCAPLUS

DN 136:65570

ED Entered STN: 04 Jan 2002

TI Formulations for neutralization of chemical and biological toxicants

IN Tadros, Maher E.; Tucker, Mark D.

PA Sandia Corporation, USA

SO Eur. Pat. Appl., 46 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM A62D003-00

CC 4-3 (Toxicology)

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1166825	A1	20020102	EP 2000-204519	20001214
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 6566574	B1	20030520	US 2000-607586	20000629
PRAI	US 2000-607586	A	20000629		
	US 1998-109235	B2	19980630		
	US 1999-146432P	P	19990729		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	EP 1166825	ICM	A62D003-00
AB	A formulation and method of making that neutralizes the adverse health effects of both chemical and biol. compds., especially chemical <b>warfare</b> (CW) and biol. <b>warfare</b> (BW) agents. The formulation of the present invention non-toxic and non-corrosive and can be delivered by a variety of means and in different phases. The formulation provides solubilizing compds. that serve to effectively render the chemical and biol. compds., particularly CW and BW compds., susceptible to attack and at least one reactive compound that serves to attack (and detoxify or kill) the compound. The at least one reactive compound can be an oxidizing compound, a nucleophilic compound or a mixture of both. The formulation can kill up to 99.99999% of bacterial spores within one hour of exposure.		
ST	chem biol toxicant neutralization; decontaminant chem biol <b>warfare</b> ; surfactant hydrotrope oxidizer nucleophile decontamination detoxification		
IT	Alcohols, uses RL: MOA (Modifier or additive use); USES (Uses) (C10-16; formulations for neutralization of chemical and biol. toxicants containing)		
IT	Named reagents and solutions RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses) (Fenton's; formulations for neutralization of chemical and biol. toxicants containing)		
IT	Aromatic hydrocarbons, processes RL: REM (Removal or disposal); PROC (Process) (alkyl, o-alkyl; formulations for neutralization of chemical and biol. toxicants)		
IT	Quaternary ammonium compounds, biological studies RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses) (alkylbenzyl dimethyl, chlorides; formulations for neutralization of chemical and biol. toxicants containing)		
IT	Spore (bacterial; formulations for neutralization of chemical and biol. toxicants)		
IT	Hydrotropes Surfactants (cationic; formulations for neutralization of chemical and biol. toxicants containing)		
IT	Amines, uses RL: MOA (Modifier or additive use); USES (Uses)		

- (copper complexes; formulations for neutralization of chemical and biol. toxicants containing)
- IT Halides  
RL: REM (Removal or disposal); PROC (Process)  
(dihalides, dialkyl phosphoramidic; formulations for neutralization of chemical and biol. toxicants)
- IT Bacillus anthracis  
Bacillus subtilis  
Pantoea agglomerans  
(efficacy of formulations for neutralization of chemical and biol. toxicants against)
- IT **Toxicants**  
(formulations for neutralization of chemical and biol.)
- IT Antibacterial agents  
**Biological warfare agents**  
**Chemical warfare agents**  
Decontamination  
**Detoxification**  
Eubacteria  
Virus  
(formulations for neutralization of chemical and biol. toxicants)
- IT **Ricins**  
RL: REM (Removal or disposal); PROC (Process)  
(formulations for neutralization of chemical and biol. toxicants)
- IT Catalysts  
Corrosion inhibitors  
Nucleophiles  
Oxidizing agents  
Solvents  
(formulations for neutralization of chemical and biol. toxicants containing)
- IT Aldehydes, biological studies  
Metal alkoxides  
Oximes  
Quaternary ammonium compounds, biological studies  
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)  
(formulations for neutralization of chemical and biol. toxicants containing)
- IT Alcohols, biological studies  
RL: BUU (Biological use, unclassified); MSC (Miscellaneous); BIOL (Biological study); USES (Uses)  
(in formulations for neutralization of chemical and biol. toxicants)
- IT Fluorides, processes  
RL: REM (Removal or disposal); PROC (Process)  
(o-alkyl phosphono-; formulations for neutralization of chemical and biol. toxicants)
- IT Nitriles, processes  
RL: REM (Removal or disposal); PROC (Process)  
(o-alkyl phosphoramido-; formulations for neutralization of chemical and biol. toxicants)
- IT Quaternary ammonium compounds, biological studies  
RL: BUU (Biological use, unclassified); MSC (Miscellaneous); BIOL (Biological study); USES (Uses)  
(pentamethyltallow alkyltrimethylenediammonium dichlorides, Adogen 477; in formulations for neutralization of chemical and biol. toxicants)
- IT Polymers, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(water-soluble; formulations for neutralization of chemical and biol. toxicants containing)
- IT 866-97-7, Tetrapentylammonium bromide  
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)  
(cationic hydrotrope in formulations for neutralization of chemical and biol. toxicants)

IT 1643-19-2, Tetrabutylammonium bromide 88932-02-9  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (cationic hydrotrope; formulations for neutralization of chemical and  
 biol. toxicants containing)

IT 121-75-5, Malathion 2524-64-3, Diphenyl chlorophosphate  
 RL: NUU (Other use, unclassified); REM (Removal or disposal); PROC  
 (Process); USES (Uses)  
 (chemical warfare simulant for formulations for neutralization  
 of chemical and biol. toxicants)

IT 60-23-1D, Aminoethane-2-thiol, dialkyl derivs. 74-90-8, Hydrogen  
 cyanide, processes 75-44-5, Phosgene 76-06-2, Chloropicrin 76-93-7,  
 Diphenylhydroxyacetic acid, processes 78-53-5, Amiton 111-48-8D,  
 Thiodiglycol, derivs. 141-43-5D, Aminoethan-2-ol, dialkyl derivs.  
 382-21-8 464-07-3D, Pinacolyl alcohol, derivs. 505-60-2,  
 Bis(2-chloroethyl)sulfide 506-77-4, Cyanogen chloride 541-25-3D,  
 Lewisite, analogs 676-97-1, Methylphosphonyl dichloride 689-98-5D,  
 Aminoethyl-2-chloride, dialkyl derivs. 756-79-6, Dimethyl  
 methylphosphonate 1445-76-7, Chlorosarin 1619-34-7, Quinuclidin-3-ol  
 2625-76-5 3563-36-8 6581-06-2, 3-Quinuclidinyl benzilate 7040-57-5,  
 Chlorosoman 7719-09-7, Thionyl chloride 7719-12-2, Phosphorous  
 trichloride 7784-34-1, Arsenic trichloride 10025-67-9, Sulfur  
 monochloride 10025-87-3, Phosphoric trichloride 10026-13-8, Phosphorus  
 pentachloride 10545-99-0, Sulfur dichloride 14901-63-4D, Phosphite,  
 Alkyl derivs. 35523-89-8, Saxitoxin 63869-13-6 63905-10-2  
 63918-89-8, Bis(2-chloroethylthioethyl)ether 63918-90-1 142868-93-7  
 142868-94-8  
 RL: REM (Removal or disposal); PROC (Process)  
 (formulations for neutralization of chemical and biol. toxicants)

IT 57-09-0, Cetyltrimethylammonium bromide 121-54-0, Benzethonium chloride  
 124-43-6, Urea hydrogen peroxide 3978-51-6 7681-52-9, Sodium  
 hypochlorite 7722-84-1, Hydrogen peroxide, biological studies  
 22047-43-4, Peroxymonosulfate  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (formulations for neutralization of chemical and biol. toxicants containing)

IT 102-71-6, Triethanolamine, uses 103-49-1, N,N-Dibenzylamine 108-01-0,  
 Dimethylethanolamine 304-91-6 9000-30-0, Guar gum 9002-89-5,  
 Polyvinyl alcohol 9003-05-8, Polyacrylamide  
 26062-79-3, Polydiallyl dimethylammonium chloride  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (formulations for neutralization of chemical and biol. toxicants containing)

IT 39421-75-5, JAGUAR 8000  
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
 BIOL (Biological study); USES (Uses)  
 (in formulations for neutralization of chemical and biol. toxicants)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

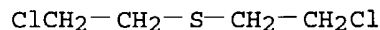
- (1) Commissariat Energie Atomique; EP 0526305 A 1993 HCAPLUS
- (2) Commissariat Energie Atomique; FR 2775606 A 1999 HCAPLUS
- (3) Cronce, D; US 5760089 A 1998 HCAPLUS
- (4) Cronce, D; US 5859064 A 1999 HCAPLUS
- (5) France, E; FR 2651133 A 1991 HCAPLUS
- (6) Irdec S A; EP 0894512 A 1999 HCAPLUS
- (7) Irdec Sa; FR 2766724 A 1999 HCAPLUS
- (8) Seiders, R; US H366 H 1987
- (9) Stonehill, A; US 3282775 A 1966

IT 505-60-2, Bis(2-chloroethyl)sulfide  
 RL: REM (Removal or disposal); PROC (Process)  
 (formulations for neutralization of chemical and biol. toxicants)

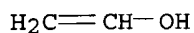
RN 505-60-2 HCAPLUS

CN Ethane, 1,1'-thiobis[2-chloro- (9CI) (CA INDEX NAME)





IT 9002-89-5, Polyvinyl alcohol  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (formulations for neutralization of chemical and biol. toxicants containing)  
 RN 9002-89-5 HCAPLUS  
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 557-75-5  
 CMF C2 H4 O



L120 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:749439 HCAPLUS  
 DN 135:253256  
 ED Entered STN: 15 Oct 2001  
 TI Super-energy biochemical pesticide-removing and fresh-keeping balls  
 IN Huang, Xuehong  
 PA Hainan Yuzhou Energy Development Co., Ltd., Peop. Rep. China  
 SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.  
 CODEN: CNXXEV  
 DT Patent  
 LA Chinese  
 IC ICM A62D003-00  
 CC 5-3 (Agrochemical Bioregulators)  
 Section cross-reference(s): 17, 36  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CN 1292297	A	20010425	CN 1999-120953	19990923 <--
PRAI CN 1999-120953		19990923 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
CN 1292297	ICM	A62D003-00

AB The balls are composed of round biochem. ceramic material, oval biochem. ceramic material, and mineral powder 5 g. The balls have round jackets made of **ethylene-vinyl acetate copolymer**. The biochem. ceramic materials contain granite, magnetite, and minerals (such as limestone, **Ag** ore, etc.). The balls are used in cleaning of vegetable, meat, fabrics, etc.

ST pesticide removing ball vegetable meat fabric

IT **Environmental pollution**  
 (pesticide; super-energy biochem. pesticide-removing and fresh-keeping balls)

IT **Cleaning**  
 Meat  
 Pesticides  
 Spheres  
**Textiles**  
 Vegetable  
 (super-energy biochem. pesticide-removing and fresh-keeping balls)

IT Granite, uses  
 Limestone, uses  
 Minerals, uses

**Silver ores**

RL: TEM (Technical or engineered material use); USES (Uses)  
(super-energy biochem. pesticide-removing and fresh-keeping balls)

IT 1309-38-2, Magnetite, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(super-energy biochem. pesticide-removing and fresh-keeping balls)

L120 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:517513 HCAPLUS

DN 135:111317

ED Entered STN: 18 Jul 2001

TI Treatment agent and method for detoxicating harmful gas from semiconductor device fabrication

IN Otsuka, Kenji; Amishima, Yutaka; Hasemi, Takashi; Nawa, Yoji

PA Japan Pionics, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B01J035-10

ICS B01J023-72; B01J023-889

CC 59-4 (Air Pollution and Industrial Hygiene)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001190965	A2	20010717	JP 2000-312870	20001013 <--
	US 6447576	B1	20020910	US 2000-671139	20000928 <--
	TW 524720	B	20030321	TW 2000-89122423	20001025 <--
	CN 1295875	A	20010523	CN 2000-133741	20001027 <--
PRAI	JP 1999-308472	A	19991029	<--	

**CLASS**

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 2001190965	ICM	B01J035-10
	ICS	B01J023-72; B01J023-889

AB The agent contains CuO as an efficacious component having  $\geq 10$  m<sup>2</sup>/g BET sp. surface area alternatively together with MnO<sub>2</sub> with  $\geq 130$  m<sup>2</sup>/g BET sp. surface area for removing an organometal compound, R<sub>m</sub>-M-H<sub>n</sub> (R = an alkyl; M = As, P, S, Se or Te; and m + n = the valence of M). A harmful gas containing the organometal compound is detoxicated by bringing the gas into contact with the agent. The agent may further contain a binder, e.g. **poly(vinyl alc.)**, polyethylene glycol, polypropylene glycol, Me cellulose, etc. The harmful gas is from CVD process for semiconductor device fabrication.

ST detoxification agent organometal compd semiconductor device;  
**cupric** oxide organometal waste gas decompn; manganese dioxide organometal waste gas decompn

IT Waste gases

(from semiconductor device fabrication; organometal compound-containing waste gas detoxification by agent containing **cupric** oxide and manganese oxide)

IT **Detoxification**

Semiconductor device fabrication

(organometal compound-containing waste gas detoxification by agent containing

**cupric** oxide and manganese oxide)

IT Diatomite

Polyoxyalkylenes, uses

RL: MOA (Modifier or additive use); USES (Uses)

(organometal compound-containing waste gas detoxification by agent containing

**cupric oxide and manganese oxide)**  
 IT 1344-09-8, Sodium silicate 1344-28-1, Alumina, uses 7631-86-9, Silica,  
 uses 7681-38-1, Sodium hydrogen sulfate **9002-89-5**,  
**Poly(vinyl alcohol)** 9004-32-4, Carboxymethyl  
 cellulose 9004-67-5, Methyl cellulose 25322-68-3, Polyethylene glycol  
 25322-69-4, Polypropylene glycol  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (organometal compound-containing waste gas detoxification by agent  
 containing

**cupric oxide and manganese oxide)**  
 IT 75-33-2, Isopropylthiol 75-66-1, tert-Butylthiol 2501-94-2,  
 tert-Butylphosphine 4262-43-5, tert-Butylarsine 4538-29-8,  
 Isopropylphosphine 29749-04-0, Isopropylselenol 34172-59-3,  
 tert-Butylselenol 111129-65-8, Isopropylarsine 135107-02-7  
 350023-54-0, 2-Propanetellurol  
 RL: PEP (Physical, engineering or chemical process); POL (Pollutant); REM  
 (Removal or disposal); OCCU (Occurrence); PROC (Process)  
 (organometal compound-containing waste gas detoxification by agent  
 containing

**cupric oxide and manganese oxide)**  
 IT 1313-13-9, Manganese dioxide, uses 1317-38-0, **Cupric oxide**,  
 uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (organometal compound-containing waste gas detoxification by agent  
 containing

**cupric oxide and manganese oxide)**  
 IT **9002-89-5, Poly(vinyl alcohol)**  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (organometal compound-containing waste gas detoxification by agent  
 containing

**cupric oxide and manganese oxide)**  
 RN 9002-89-5 HCAPLUS  
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

$\text{H}_2\text{C}=\text{CH}-\text{OH}$

L120 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:645934 HCAPLUS

DN 133:239068

ED Entered STN: 15 Sep 2000

TI Plastic products with antimicrobial property

IN Sarangapani, Shantha

PA Icet, Inc., USA

SO PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM B32B027-06

ICS B32B027-30; B32B027-36; B32B027-40; C08K003-10

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 17, 42, 62

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000053413	A1	20000914	WO 2000-US5967	20000306

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,  
 CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,  
 IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,  
 MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,  
 SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,  
 DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1999-123119P P 19990306

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2000053413	ICM	B32B027-06
	ICS	B32B027-30; B32B027-36; B32B027-40; C08K003-10
AB	Plastic products, such as polyethylene terephthalate bottles or containers are commonly for food or cosmetic products packaging, comprise a polymeric carrier resin, food-grade preservatives or antimicrobial agents, and a polymeric substrate in a desired shape. The products are manufacture by (1) providing a polymeric substrate in a desired structure, (2) treating the substrate with a coating material comprising a polymeric carrier and antimicrobial agents, and (3) drying the coating or subjecting the treated substrate to blow molding.	
ST	polyethylene terephthalate container food cosmetic packaging antimicrobial; packaging material antimicrobial	
IT	Urethane rubber, uses RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (butanediol-dicyclohexylmethane diisocyanate-polytetramethylene glycol, block, block, Tecoflex EG 80A; plastic products with antimicrobial property)	
IT	Antimicrobial agents Bottles Containers Food packaging materials Food preservatives Packaging materials (plastic products with antimicrobial property)	
IT	Polyesters, uses RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (plastic products with antimicrobial property)	
IT	<b>Polyurethanes, uses</b> RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) (plastic products with antimicrobial property)	
IT	54-21-7, Sodium salicylate 65-85-0, Benzoic acid, uses 69-72-7, Salicylic acid, uses 94-13-3, Propyl paraben 120-47-8, Ethyl paraben 148-79-8, Thiabendazole 532-31-0, <b>Silver</b> benzoate 582-25-2, Potassium benzoate 4075-81-4, Calcium propionate 7440-22-4, <b>Silver</b> , uses 8006-39-1, Terpinol 14882-18-9, <b>Bismuth subsalicylate</b> 19025-97-9, <b>Silver</b> salicylate 36701-38-9, <b>Silver</b> citrate RL: MOA (Modifier or additive use); USES (Uses) (plastic products with antimicrobial property)	
IT	25038-59-9, Polyethylene terephthalate, uses RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (plastic products with antimicrobial property)	
IT	59828-41-0, Hypol 60961-73-1, Eastar Bio Copolyester 14766 88385-51-7, Hypol 5000	

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(plastic products with antimicrobial property)

IT 149642-77-3, Butanediol-1,4-dicyclohexylmethane diisocyanate-polytetramethylene glycol block copolymer

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(rubber; plastic products with antimicrobial property)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; JP 09048094 A 1997 HCAPLUS

(2) Anon; JP 09057923 A 1997 HCAPLUS

(3) Mawatari; US 5614568 A 1997 HCAPLUS

(4) Rei; US 4895877 A 1990 HCAPLUS

(5) Rei; US 5102657 A 1992 HCAPLUS

(6) Sawan; US 5869073 A 1999 HCAPLUS

IT 7440-22-4, Silver, uses 14882-18-9,

**Bismuth subsalicylate**

RL: MOA (Modifier or additive use); USES (Uses)

(plastic products with antimicrobial property)

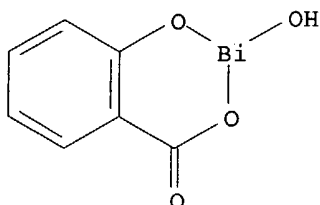
RN 7440-22-4 HCAPLUS

CN Silver (8CI, 9CI) (CA INDEX NAME)

Ag

RN 14882-18-9 HCAPLUS

CN 4H-1,3,2-Benzodioxabismin-4-one, 2-hydroxy- (9CI) (CA INDEX NAME)



L120 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:513480 HCAPLUS

DN 133:140228

ED Entered STN: 28 Jul 2000

TI Novel hydrogel isolated cochleate formulations, process of preparation and their use for the delivery of biologically relevant molecules

IN Zarif, Leila; Jin, Tuo; Segarra, Ignacio; Mannino, Raphael

PA Biodelivery Sciences, Inc., USA; University of Medicine and Dentistry

SO PCT Int. Appl., 58 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K009-127

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 10

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000042989	A2	20000727	WO 2000-US1684	20000124 <--
	W: AU, CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,				

PT, SE  
 US 6153217 A 20001128 US 1999-235400 19990122 <--  
 CA 2358505 AA 20000727 CA 2000-2358505 20000124 <--  
 EP 1143933 A2 20011017 EP 2000-909961 20000124 <--  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, FI  
 JP 2002535267 T2 20021022 JP 2000-594446 20000124 <--  
 WO 2001052817 A2 20010726 WO 2001-US2299 20010124 <--  
 WO 2001052817 A3 20020221  
 W: AU, CA, JP  
 RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
 PT, SE, TR  
 EP 1259224 A2 20021127 EP 2001-903273 20010124 <--  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, FI, CY, TR  
 JP 2003529557 T2 20031007 JP 2001-552865 20010124 <--  
 PRAI US 1999-235400 A 19990122 <--  
 WO 2000-US1684 W 20000124 <--  
 US 2000-613840 A 20000711  
 WO 2001-US2299 W 20010124

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2000042989	ICM	A61K009-127
US 6153217	ECLA	A61K009/127K <--
AB	A process for producing a small-sized, lipid-based cochleate is described. Cochleates are derived from liposomes which are suspended in an aqueous two-phase polymer solution, enabling the differential partitioning of polar mol. based-structures by phase separation. The liposome-containing two-phase polymer solution, treated with pos. charged mols. such as Ca <sup>2+</sup> or Zn <sup>2+</sup> , forms a cochleate precipitate of a particle size less than one micron. The process may be used to produce cochleates containing biol. relevant mols. Small-sized cochleates may be administered orally or through the mucosa to obtain an effective method of treatment.	
ST	liposome cochleate hydrogel oral delivery mucosa	
IT	Polymers, biological studies RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (2-phase system of immiscible; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)	
IT	Drug delivery systems (aerosols; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)	
IT	Mixing (by injection; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)	
IT	Lipids, biological studies RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (charged; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)	
IT	Essential oils RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (cinnamon; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)	
IT	Anesthetics Antibacterial agents Antitumor agents Antiviral agents	

**Buffers**

Candida albicans

Centrifugation

**Detergents**

Drugs

Fungicides

Hydrogels

Hydrogen bond

Immunosuppressants

Macrophage

Particle size distribution

Tranquilizers

Vasodilators

(hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)

IT **Phosphatidylserines**

RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)

IT **Antigens**

Cannabinoids

DNA

Estrogens

Nucleic acids

Proteins, specific or class

Steroids, biological studies

RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)

IT **Drug delivery systems**

(injections, i.m.; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)

IT **Drug delivery systems**

(injections, i.v.; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)

IT **Drug delivery systems**

(injections, s.c.; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)

IT **Drug delivery systems**

(intradermal; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)

IT **Drug delivery systems**

(intrapulmonary; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)

IT **Polyoxyalkylenes, biological studies**

RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(lipid conjugates; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)

IT **Zwitterions**

(lipids; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)

IT **Drug delivery systems**

(liposomes, cochleates; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)

- relevant mols.)
- IT Drug delivery systems  
(mucosal; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)
- IT Drug delivery systems  
(nasal; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)
- IT Anti-inflammatory agents  
(nonsteroidal; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)
- IT Drug delivery systems  
(ophthalmic; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)
- IT Drug delivery systems  
(oral; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)
- IT Drug delivery systems  
(parenterals; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)
- IT Anti-inflammatory agents  
(steroidal; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)
- IT Drug delivery systems  
(suppositories; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)
- IT Drug delivery systems  
(transdermal; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)
- IT Liposomes  
(unilamellar; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)
- IT Drug delivery systems  
(vaginal; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)
- IT 29836-26-8, Octyl glucoside  
RL: NUU (Other use, unclassified); USES (Uses)  
(detergent; hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)
- IT 53-86-1, Indomethacin 57-41-0, Phenytoin 58-22-0, Testosterone 113-15-5D, Ergotamine, derivs. 148-82-3, Melphalan 298-46-4, Carbamazepine 512-64-1, Echinomycin 1397-89-3, Amphotericin B 1421-14-3, Propanidid 2078-54-8, Propofol 6811-55-8, Dioleoylphosphatidylserine 7646-79-9, Cobalt chloride, biological studies 7646-85-7, Zinc chloride, biological studies 8067-82-1, Alphadione 9002-89-5, Polyvinylalcohol 9003-09-2, Polyvinylmethyl ether 9003-39-8, Polyvinylpyrrolidone 9004-54-0, Dextran, biological studies 10043-52-4, Calcium chloride, biological studies 11103-57-4, Vitamin a 13292-46-1, Rifampin 21829-25-4, Nifedipine 22204-53-1, Naproxen 22832-87-7, Miconazole nitrate 25316-40-9, Adriamycin 25322-68-3D, Polyethylene glycol, lipid conjugates 25702-74-3, Ficoll 29767-20-2, Teniposide 33069-62-4, Taxol 53123-88-9, Rapamycin 59277-89-3, Acyclovir 114977-28-5, Taxotere 159989-64-7, Nelfinavir 170931-04-1  
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)



IT 9002-89-5, Polyvinylalcohol  
 RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (hydrogel-isolated cochleate formulations, process of preparation and their use for oral or mucosal delivery of biol. relevant mols.)  
 RN 9002-89-5 HCAPLUS  
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 557-75-5  
 CMF C2 H4 O

$\text{H}_2\text{C}=\text{CH}-\text{OH}$

L120 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2000:197615 HCAPLUS  
 DN 132:226650  
 ED Entered STN: 28 Mar 2000  
 TI Filters for deodorization and dust collection and air purifiers equipped with the filters  
 IN Nojima, Hideo; Miyata, Akio; Suzuki, Kaoru; Watsuji, Toru  
 PA Sharp Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM A61L009-00  
 ICS A61L009-16; B01D046-00; B01D053-04  
 CC 59-6 (Air Pollution and Industrial Hygiene)  
 Section cross-reference(s): 47, 48, 74

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000084056	A2	20000328	JP 1998-255026	19980909 <--
PRAI JP 1998-255026		19980909	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2000084056	ICM	A61L009-00
	ICS	A61L009-16; B01D046-00; B01D053-04

AB The filter comprises a 1st deodorization filter carrying a decomposition photocatalyst and an odorous substance adsorbent, a 2nd filter carrying a transition metal chelate compound for decomposition of odorous substances, and

a high-performance particulate removal filter. Air purifier equipped with the filter and a means for feeding air through the filter is also claimed. Spreading of odor is prevented even when the photocatalyst is inactive.

ST deodorization filter air purifier titania photocatalyst; HEPA filter air purifn deodorization; ULPA filter air purifn deodorization; transition metal chelate deodorizer filter; metallophthalocyanine catalyst air filter deodorization

IT Zeolites (synthetic), uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (Cu, adsorbents; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)

IT Zeolites (synthetic), uses  
 RL: DEV (Device component use); TEM (Technical or engineered material

- use); USES (Uses)  
 (adsorbents; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)
- IT Air purification  
 (adsorption, filters for; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)
- IT Air filters  
 (deodorization and purification; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)
- IT Tobacco smoke  
 (deodorization of; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)
- IT Air purification apparatus  
 (deodorization, filters for; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)
- IT Polyurethanes, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (foams, supports; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)
- IT Filters  
 (honeycomb, ceramic, supports; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)
- IT Polyamide fibers, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (nets; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)
- IT Nets  
 (nylon, supports; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)
- IT Transition metal complexes  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (phthalocyanine; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)
- IT Plastic foams  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (polyurethane, supports; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)
- IT Ceramics  
 (porous, supports; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)
- IT Metallophthalocyanines  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (transition metal complexes; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)
- IT Adsorbents

Air purification apparatus  
(trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)

IT Transition metal complexes

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)

IT 1344-28-1, Aluminum oxide (Al<sub>2</sub>O<sub>3</sub>), uses

RL: DEV (Device component use); USES (Uses)

(honeycomb; trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)

IT 13463-67-7, Titanium oxide (TiO<sub>2</sub>), uses 122403-31-0

RL: CAT (Catalyst use); DEV (Device component use); USES (Uses)

(trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)

IT 64-19-7, Acetic acid, processes 75-07-0, Acetaldehyde, processes 7664-41-7, Ammonia, processes

RL: REM (Removal or disposal); PROC (Process)

(trilayered deodorization filters comprising photocatalysts and adsorbents and transition metal chelate compds. and particle removing filters)

L120 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:67579 HCAPLUS

DN 132:119581

ED Entered STN: 28 Jan 2000

TI A method for manufacturing the carrier for immobilizing a physiologically active substance

IN Kuniyoshi, Minoru; Shigehiro, Kiyotaka

PA Tosoh Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G01N033-553

ICS G01N033-545

CC 9-16 (Biochemical Methods)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000028616	A2	20000128	JP 1998-195465	19980710 <--
PRAI	JP 1998-195465		19980710 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2000028616	ICM	G01N033-553
	ICS	G01N033-545

AB A method is provided for manufacturing the carrier which possesses excellent properties suited for immobilizing a physiol. active substance such as antigen or antibody to carry out an immunol. reaction. This carrier possesses an arbitrary shape (e.g., spherical shape with an average diameter of 0.05-10mm), and a rough surface where magnetism-responsive powders (e.g., iron, nickel, iron/cobalt, silicon steel, ferrite, magnetite) is contained in a saponified part (5-100% saponification rate) of carboxylic acid vinyl-type copolymer resin (e.g., vinyl chloride/vinyl acetate, vinyl chloride/vinyl propionate, vinyl chloride/vinyl acetate/vinyl propionate, ethylene/vinyl acetate, vinylpyrrolidone/vinyl acetate) or cellulose-type

**copolymer** resin (e.g., cellulose acetate, cellulose acetate/propionate, cellulose acetate/butyrate). The method comprises the first step for incorporating magnetism-responsive powder into the resin by kneading, the second step for generating spherical shape using water-soluble macromol. dispersing agent (e.g., **polyvinyl alc.**), the third step for melting the solid dispersing agent (e.g., calcium carbonate, calcium hydroxide, magnesium carbonate, magnesium hydroxide, **zinc** oxide, **zinc** carbonate, strontium carbonate, barium carbonate) and making it adhesive to the surface of the resin, the fourth step for saponifying carboxylic acid vinyl groups with an alkaline agent (alkali metal hydroxide or carbonate dissolved in water or methanol), and the fifth step for dissolving the solid dispersing agent with an acid (e.g., hydrochloric acid, sulfuric acid, nitric acid, acetic acid, phosphoric acid). An improved S/N ratio was observed in measuring TSH with anti-TSH monoclonal antibody immobilized on the carrier prepared by this method, comparing with the carrier prepared by the conventional method.

ST carrier vinyl resin cellulose immobilization immunoassay

IT Alkali metals, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (carbonate; method for manufacturing carrier for immobilizing physiol. active substance)

IT Vinyl compounds, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (carboxy-containing, polymers; method for manufacturing carrier for immobilizing physiol. active substance)

IT **Fibers**  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (cellulose acetate propionate; method for manufacturing carrier for immobilizing physiol. active substance)

IT **Vinyon fibers**  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (**copolymer** with vinyl propionate; **copolymer** with vinyl propionate and vinyl acetate; method for manufacturing carrier for immobilizing physiol. active substance)

IT **Polyolefin fibers**  
**Polyolefin fibers**  
 Synthetic polymeric **fibers**, uses  
 Synthetic polymeric **fibers**, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (**ethylene-vinyl acetate**; method for manufacturing carrier for immobilizing physiol. active substance)

IT Carriers  
 Dispersing agents  
 Immobilization, biochemical  
 Immunoassay  
 Magnetic powders  
 Saponification  
 Sizes (agents)  
 (method for manufacturing carrier for immobilizing physiol. active substance)

IT Antibodies  
**Antigens**  
 RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process); USES (Uses)  
 (method for manufacturing carrier for immobilizing physiol. active substance)

IT Ferrites  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (method for manufacturing carrier for immobilizing physiol. active substance)

IT Alkali metal hydroxides  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(method for manufacturing carrier for immobilizing physiol. active substance)

IT Antibodies  
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
(monoclonal, to TSH; method for manufacturing carrier for immobilizing physiol. active substance)

IT Synthetic polymeric **fibers**, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(vinyl acetate, **copolymer** with vinylpyrrolidone; method for manufacturing carrier for immobilizing physiol. active substance)

IT Synthetic polymeric **fibers**, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(vinyl acetate-vinyl chloride; method for manufacturing carrier for immobilizing physiol. active substance)

IT Synthetic polymeric **fibers**, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(vinylpyrrolidone, **copolymer** with vinyl acetate; method for manufacturing carrier for immobilizing physiol. active substance)

IT 9002-71-5, Thyrotropin  
RL: ANT (Analyte); ANST (Analytical study)  
(method for manufacturing carrier for immobilizing physiol. active substance)

IT 67-56-1, Methanol, uses 471-34-1, Calcium carbonate, uses 513-77-9, Barium carbonate 546-93-0, Magnesium carbonate 1305-62-0, Calcium hydroxide, uses 1309-38-2, Magnetite (Fe<sub>3</sub>O<sub>4</sub>), uses 1309-42-8, Magnesium hydroxide 1314-13-2, **Zinc** oxide, uses 1633-05-2, Strontium carbonate 3486-35-9, **Zinc** carbonate **7439-89-6**, **Iron**, uses 7440-02-0, Nickel, uses 7440-48-4, Cobalt, uses 7732-18-5, Water, uses **9002-89-5**, **Polyvinyl alcohol** 9004-34-6D, Cellulose, derivs., uses 9004-35-7, Cellulose acetate 9004-36-8, Cellulose butyrate acetate 11100-68-8, Steel, silicon, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(method for manufacturing carrier for immobilizing physiol. active substance)

IT 64-19-7, Acetic acid, reactions 7647-01-0, Hydrochloric acid, reactions 7664-38-2, Phosphoric acid, reactions 7664-93-9, Sulfuric acid, reactions 7697-37-2, Nitric acid, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(method for manufacturing carrier for immobilizing physiol. active substance)

IT **7439-89-6**, **Iron**, uses **9002-89-5**, **Polyvinyl alcohol**  
RL: NUU (Other use, unclassified); USES (Uses)  
(method for manufacturing carrier for immobilizing physiol. active substance)

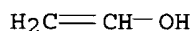
RN 7439-89-6 HCAPLUS  
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

## Fe

RN 9002-89-5 HCAPLUS  
CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5  
CMF C2 H4 O



L120 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1999:434624 HCAPLUS  
 DN 131:180857  
 ED Entered STN: 15 Jul 1999  
 TI Microspheres of chitosan/**poly(vinylalcohol)**  
 incorporating tetrasulphonated **copper** (II) phthalocyanine:  
 preparation and characterization  
 AU Stolberg, J.; Laranjeira, M. C. M.; Sanchez, M. N. M.; Klug, M.; Favere,  
 V. T.  
 CS QUITTECH - Grupo de pesquisa em Quitinas e Aplicacoes Technologicas da  
 UFSC, Departamento de Quimica, Universidade Federal de Santa Catarina,  
 Florianopolis, 88040-900, Brazil  
 SO Journal of Microencapsulation (1999), 16(4), 431-438  
 CODEN: JOMIEF; ISSN: 0265-2048  
 PB Taylor & Francis Ltd.  
 DT Journal  
 LA English  
 CC 4-1 (Toxicology)  
 AB Tetrasulfonated **copper** (II) phthalocyanine (TCP), in the salt  
 form, was incorporated into a blend of chitosan (CTS)/**poly(**  
**vinylalc.)** (PVA) and microspheres were produced by using  
 the method of salt coacervation with 20% sodium sulfate. Spectroscopic  
 anal., DSC and TGA were carried out to characterize the form in which the  
 macro-complex was immobilized in the blend. Alkaline treatment of the  
 coagulating medium produces species which are more stable, but with a  
 different morphol. observed by SEM. Microspheres coagulated in sodium  
 sulfate and also in an alkaline salt medium (0.5 and 2.0M NaOH) were exposed  
 to a solution of the dye, methylene blue, at an initial concentration of 7  
 mg/L and  
 maintained in contact for 14 h at 26°. The kinetic data revealed a  
 decrease in the capacity of sorption of the microspheres that had received  
 the alkaline treatment. It is proposed that the new morphol. attributed to  
 these species blocks some sites for complex formation, making them  
 inaccessible to the dye.  
 ST chitosan **PVA** microsphere **copper** phthalocyanine  
 encapsulation; carcinogen detection chitosan **PVA copper**  
 phthalocyanine  
 IT **Carcinogens**  
 Coacervation  
 Microspheres  
 Sorption  
 Sorption kinetics  
 (preparation and characterization of microspheres of chitosan/**PVA**  
 incorporating **copper** phthalocyanine tetrasulfonate)  
 IT 9002-89-5, **Poly(vinyl alcohol)**  
 9012-76-4, Chitosan  
 RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or  
 chemical process); POF (Polymer in formulation); ANST (Analytical study);  
 PROC (Process); USES (Uses)  
 (blends; preparation and characterization of microspheres of chitosan/  
**PVA** incorporating **copper** phthalocyanine  
 tetrasulfonate)  
 IT 26400-93-1, **Copper** (II) phthalocyanine tetrasulfonate  
 RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or  
 chemical process); ANST (Analytical study); PROC (Process)  
 (preparation and characterization of microspheres of chitosan/**PVA**  
 incorporating **copper** phthalocyanine tetrasulfonate)  
 IT 61-73-4, Methylene blue

RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(preparation and characterization of microspheres of chitosan/PVA  
incorporating **copper** phthalocyanine tetrasulfonate)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Blagrove, R; Australian Journal of Chemistry 1972, V25, P2553 HCAPLUS
- (2) Hayatsu, H; Chemistry and Pharmacy Bulletin 1986, V34, P944 HCAPLUS
- (3) Hayatsu, H; Gann 1983, V74, P472 HCAPLUS
- (4) Hayatsu, H; Journal of Chromatography 1992, V597, P37 HCAPLUS
- (5) Kirk-Othmer; Encyclopaedia of Chemical Technology 1983, V23, P849
- (6) Miguez, M; Journal of Microencapsulation 1997, V14, P639 HCAPLUS
- (7) Moreira, J; Quimica Nova 1995, V18, P362 HCAPLUS
- (8) Povey, A; Carcinogenesis 1990, V11, P1989 HCAPLUS
- (9) Safarik, I; Water Research 1995, V29, P101 HCAPLUS

IT 9002-89-5, Poly(vinyl alcohol)

RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or  
chemical process); POF (Polymer in formulation); ANST (Analytical study);  
PROC (Process); USES (Uses)  
(blends; preparation and characterization of microspheres of chitosan/  
PVA incorporating **copper** phthalocyanine  
tetrasulfonate)

RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

H<sub>2</sub>C=CH-OH

L120 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:392556 HCAPLUS

DN 131:29590

ED Entered STN: 28 Jun 1999

TI Methods of measuring analytes with barrier webs

IN Caldwell, J. Michael

PA Nextec Applications, Inc., USA

SO U.S., 55 pp., Cont.-in-part of U.S. Ser. No. 472,568, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC ICM C12Q001-70

ICS G01N033-543

NCL 435005000

CC 9-16 (Biochemical Methods)

Section cross-reference(s): 38

FAN.CNT 11

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5912116	A	19990615	US 1995-486651	19950607 <--
	US 5004643	A	19910402	US 1989-319778	19890310 <--
	CA 1338232	A1	19960409	CA 1989-593680	19890314 <--
	CA 1339587	A1	19971216	CA 1989-593681	19890314 <--
	US 5209965	A	19930511	US 1991-680645	19910402 <--
	US 5418051	A	19950523	US 1993-17855	19930216 <--
	US 6312523	B1	20011106	US 1999-406080	19990927 <--
	US 2002088396	A1	20020711	US 2001-982250	20011016 <--
PRAI	US 1988-167630	B2	19880314	<--	
	US 1988-167643	B2	19880314	<--	

US 1988-167797	B2	19880314	<--
US 1988-167869	B2	19880314	<--
US 1989-319778	A1	19890310	<--
US 1991-680645	A1	19910402	<--
US 1993-17855	A2	19930216	<--
US 1995-407191	A2	19950317	<--
US 1995-442983	B2	19950517	<--
US 1995-472568	B2	19950607	<--
US 1997-962698	A3	19971103	<--
US 1999-406080	A1	19990927	<--

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5912116	ICM	C12Q001-70
	ICS	G01N033-543
	NCL	435005000
US 2002088396	ECLA	A61F013/00; D06N003/04F; D06N003/12; D06N003/12F; D21H017/59; D21H019/32; D21H025/06; A61F013/15C3; A61L015/26; A61L015/52; B05C005/02D1B; B05C011/02; C08J009/40; C08J009/42; C14C009/0; C14C011/00; D04H001/58; D04H013/00B2; D06B015/08; D06M015/256; D06M015/263; D06M015/356T; D06M; D06M015/643; D06M015/653; D06M015/657; D06N003/00B
AB		The present invention includes novel barrier webs that have certain desirable phys. qualities such as water resistance, increased durability, improved barrier qualities and the like. The present invention further comprises a barrier web comprising a web that has been treated with a curable shear thinned thixotropic polymer composition, the fabric being adapted to be substantially impermeable to liqs., permeable to gases and impermeable to microorganisms. The barrier webs of the present invention are either impermeable to all microorganisms or are impermeable to microorganisms of certain sizes. The present invention also includes fabrics that are capable of either selective binding certain microorganisms, particles or mols. depending upon what binding partners are incorporated into the polymer before application to the fabric.
ST		polymer fabric barrier web body fluid analyte
IT		Silicone rubber, uses RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses) (SLE 5100, SLE 5106, SLE 5300, SLE 5500; methods of measuring analytes with barrier webs)
IT		Polysiloxanes, uses RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses) (Siloprene LSR 2540/01; methods of measuring analytes with barrier webs)
IT		Polyamide fibers, uses RL: DEV (Device component use); USES (Uses) (aramid; methods of measuring analytes with barrier webs)
IT		Synthetic polymeric fibers, uses RL: DEV (Device component use); USES (Uses) (butylphenol-formaldehyde-phenol; methods of measuring analytes with barrier webs)
IT		Silicone rubber, uses RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses) (di-Me, vinyl group-terminated; methods of measuring analytes with barrier webs)
IT		Silicone rubber, uses RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses) (di-Me; methods of measuring analytes with barrier webs)
IT		Pleura (effusion; methods of measuring analytes with barrier webs)
IT		Phenolic resins, uses Phenolic resins, uses RL: DEV (Device component use); USES (Uses)



(fiber; methods of measuring analytes with barrier webs)

IT Polysiloxanes, uses  
 RL: DEV (Device component use); USES (Uses)  
 (fluoro; methods of measuring analytes with barrier webs)

IT Textiles  
 (linen; methods of measuring analytes with barrier webs)

IT Antimicrobial agents  
 Ascites  
 Bacteria (Eubacteria)  
 Blood analysis  
 Blood plasma  
 Blood serum  
 Cell  
 Cerebrospinal fluid  
 Cotton fibers  
 Dyes  
 Ebola virus  
 Films  
 Foams  
 Hepatitis B virus  
 Hepatitis C virus  
 Human immunodeficiency virus  
 Jute  
 Latex  
 Leather  
 Leather substitutes  
 Lymph  
 Membrane filters  
 Microorganism  
 Mucus  
 Pigments, nonbiological  
 Saliva  
 Semen  
 Silk  
 Streptococcus group A  
 Synovial fluid  
 Urine  
 Virus  
 Wool

(methods of measuring analytes with barrier webs)

IT Actins  
 Antibodies  
**Antigens**  
 Enzymes, uses  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (methods of measuring analytes with barrier webs)

IT Alkenes, uses  
 RL: DEV (Device component use); USES (Uses)  
 (methods of measuring analytes with barrier webs)

IT Fluoropolymers, uses  
 RL: DEV (Device component use); USES (Uses)  
 (methods of measuring analytes with barrier webs)

IT Glass, uses  
 RL: DEV (Device component use); USES (Uses)  
 (methods of measuring analytes with barrier webs)

IT Polyamide fibers, uses  
 RL: DEV (Device component use); USES (Uses)  
 (methods of measuring analytes with barrier webs)

IT Polyamides, uses  
 RL: DEV (Device component use); USES (Uses)  
 (methods of measuring analytes with barrier webs)

IT Polyesters, uses  
 RL: DEV (Device component use); USES (Uses)

(methods of measuring analytes with barrier webs)

IT Polyimides, uses  
RL: DEV (Device component use); USES (Uses)  
(methods of measuring analytes with barrier webs)

IT Polymers, uses  
RL: DEV (Device component use); USES (Uses)  
(methods of measuring analytes with barrier webs)

IT Polysulfones, uses  
RL: DEV (Device component use); USES (Uses)  
(methods of measuring analytes with barrier webs)

IT **Polyurethanes, uses**  
RL: DEV (Device component use); USES (Uses)  
(methods of measuring analytes with barrier webs)

IT Rayon, uses  
RL: DEV (Device component use); USES (Uses)  
(methods of measuring analytes with barrier webs)

IT Spandex fibers  
RL: DEV (Device component use); USES (Uses)  
(methods of measuring analytes with barrier webs)

IT Vinyon fibers  
RL: DEV (Device component use); USES (Uses)  
(methods of measuring analytes with barrier webs)

IT Proteins, general, uses  
RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)  
(methods of measuring analytes with barrier webs)

IT Synthetic polymeric fibers, uses  
RL: DEV (Device component use); USES (Uses)  
(phenolic resins; methods of measuring analytes with barrier webs)

IT **Polyurethanes, uses**  
**Polyurethanes, uses**  
RL: DEV (Device component use); USES (Uses)  
(polysiloxane-; methods of measuring analytes with barrier webs)

IT Polysiloxanes, uses  
Polysiloxanes, uses  
RL: DEV (Device component use); USES (Uses)  
(**polyurethane**-; methods of measuring analytes with barrier webs)

IT Cell  
(stem; methods of measuring analytes with barrier webs)

IT 58-85-5, Biotin  
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
(methods of measuring analytes with barrier webs)

IT 51-79-6, Urethane 64-19-7, Acetic acid, uses 2669-89-8, Vinyl  
**9002-84-0** 9004-34-6, Cellulose, uses 9004-35-7, Cellulose  
acetate 9004-70-0, Nitrocellulose 25038-59-9, uses  
RL: DEV (Device component use); USES (Uses)  
(methods of measuring analytes with barrier webs)

IT **7440-50-8, Copper**, uses  
RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)  
(methods of measuring analytes with barrier webs)

IT 7553-56-2, Iodine, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(methods of measuring analytes with barrier webs)

IT 131-56-6, Uvinul 400  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(methods of measuring analytes with barrier webs)

IT 75-35-4D, Saran, polymers  
RL: DEV (Device component use); USES (Uses)  
(saran; methods of measuring analytes with barrier webs)

RE.CNT 89 THERE ARE 89 CITED REFERENCES AVAILABLE FOR THIS RECORD

- RE
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  - (2) Anon; RU 422469 1974

(3) Anon; JP 57149559 1982 HCAPLUS  
(4) Anon; WO 8908553 1989 HCAPLUS  
(5) Anon; WO 8908554 1989 HCAPLUS  
(6) Anon; WO 8908555 1989 HCAPLUS  
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(13) Caldwell; US 2773050 1956 HCAPLUS  
(14) Caldwell; US 2839479 1958 HCAPLUS  
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(19) Caldwell; US 3184421 1965 HCAPLUS  
(20) Caldwell; US 3265529 1966  
(21) Caldwell; US 4666765 1987 HCAPLUS  
(22) Caldwell; US 5004643 1991 HCAPLUS  
(23) Caldwell; US 5209965 1993 HCAPLUS  
(24) Caldwell; US 5418051 1995 HCAPLUS  
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(30) Dyksterhouse; US 5128198 1992  
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(39) Guenthner; US 3398182 1968 HCAPLUS  
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(49) Kroupa; US 4500659 1985 HCAPLUS  
(50) Landucci; US 3896251 1975 HCAPLUS  
(51) Lauchenauer; US 4588614 1986 HCAPLUS  
(52) Le; US 4895806 1990 HCAPLUS  
(53) Lee; US 4032502 1977 HCAPLUS  
(54) Lee; US 4162243 1979 HCAPLUS  
(55) Linscott; US 2117432 1938 HCAPLUS  
(56) Maccalous; US 4112179 1978 HCAPLUS  
(57) Makami; US 4478895 1984 HCAPLUS  
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(60) Modic; US 3436366 1969  
(61) Modic; US 4472470 1984  
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(63) Moeller; US 4216252 1980 HCAPLUS  
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- (78) Svec; US 4952349 1990 HCAPLUS
- (79) Sweet; US 4427801 1984 HCAPLUS
- (80) Sweet; US 4585830 1986 HCAPLUS
- (81) Takamizawa; US 4370365 1983 HCAPLUS
- (82) Travor; US 4600436 1986 HCAPLUS
- (83) Von Blucher; US 4454191 1984 HCAPLUS
- (84) Weinheim; US 1281728 1918
- (85) West; US 4287261 1981 HCAPLUS
- (86) West; US 4369231 1983 HCAPLUS
- (87) Yamazaki; US 4110392 1978
- (88) Yankus; US 5322727 1994
- (89) Yeo; US 4758239 1988

IT 9002-84-0

RL: DEV (Device component use); USES (Uses)  
(methods of measuring analytes with barrier webs)

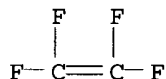
RN 9002-84-0 HCAPLUS

CN Ethene, tetrafluoro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 116-14-3

CMF C2 F4



IT 7440-50-8, **Copper**, uses

RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)  
(methods of measuring analytes with barrier webs)

RN 7440-50-8 HCAPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

L120 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:330536 HCAPLUS

DN 130:327866

ED Entered STN: 28 May 1999

TI Treatment of metal surfaces for microbiocidal activity

IN Koeppen, Hans-joachim; Wagner, Gerhard; Woywod, Britta

PA Volkswagen A.-G., Germany

SO Ger. Offen., 4 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C23C030-00  
ICS B60H003-06  
CC 56-6 (Nonferrous Metals and Alloys)  
Section cross-reference(s): 59

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19750128	A1	19990520	DE 1997-19750128	19971113 <--
PRAI	DE 1997-19750128		19971113	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 19750128	ICM	C23C030-00
	ICS	B60H003-06

AB To eliminate a musty odor generated in automobile air conditioning units, Al alloy evaporator lamellas are coated with **Cu** which has a microbiocidal efficiency. **Cu** is deposited either directly or after deposition of an intermediate layer (e.g., Ni layer). Optionally, **Cu** is deposited in a form of a lacquer with embedded **Cu** powder.

ST automobile air conditioning odor removal; **copper** coating aluminum microbiocidal effect

IT Air conditioners  
(automotive; removal of odor by **copper** coating of aluminum evaporator lamellas)

IT **Coating materials**  
(**copper** coating of aluminum evaporator lamellas for removal of odor from automotive air conditioners)

IT Lacquers  
(for **copper** coating of aluminum evaporator lamellas for removal of odor from automotive air conditioners)

IT Chromates  
Silicates, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(intermediate layer for **copper** coating of aluminum evaporator lamellas)

IT Acrylic polymers, uses  
Epoxy resins, uses  
Polyesters, uses  
**Polyurethanes, uses**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(lacquer for **copper** coating of aluminum evaporator lamellas for removal of odor from automotive air conditioners)

IT **Health hazard**  
Industrial hygiene  
Odor and Odorous substances  
(removal of odor from automotive air conditioners)

IT **Coating process**  
Evaporators  
(removal of odor from automotive air conditioners by **copper** coating of aluminum evaporator lamellas)

IT Aluminum alloy  
RL: TEM (Technical or engineered material use); USES (Uses)  
(removal of odor from automotive air conditioners by **copper** coating of aluminum evaporator lamellas)

IT 7440-02-0, Nickel, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(intermediate layer for **copper** coating of aluminum evaporator lamellas)

IT 9004-36-8, Cellulose acetobutyrate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(lacquer for **copper** coating of aluminum evaporator lamellas for removal of odor from automotive air conditioners)

IT 7440-50-8, **Copper**, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (removal of odor from automotive air conditioners by **copper**  
 coating of aluminum evaporator lamellas)

IT 7440-50-8, **Copper**, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (removal of odor from automotive air conditioners by **copper**  
 coating of aluminum evaporator lamellas)

RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

L120 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:745125 HCAPLUS

DN 129:347345

ED Entered STN: 24 Nov 1998

TI Encrustation-resistant and **antibacterial** coatings for medical applicationsIN **Sarangapani, Shantha**PA **Icet, Inc., USA**

SO PCT Int. Appl., 43 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C08K003-10

ICS C08K005-10; C08K005-09; C08K005-51

CC 63-8 (Pharmaceuticals)

Section cross-reference(s): 42

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9850461	A1	19981112	WO 1998-US9000	19980504
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5877243	A	19990302	US 1997-851306	19970505
EP 980402	A1	20000223	EP 1998-923327	19980504
EP 980402	B1	20030402		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001525694	T2	20011211	JP 1998-548310	19980504
AT 236214	E	20030415	AT 1998-923327	19980504
PRAI US 1997-851306	A	19970505		
WO 1998-US9000	W	19980504		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 9850461	ICM	C08K003-10
	ICS	C08K005-10; C08K005-09; C08K005-51

AB The title coatings comprise acids selected from aminocarboxylic acids, tricarboxylic acids, amino acids, phosphonic acids, and phenolic compds., polymers, and **Ag** powder. The coatings resist bacterial colonization and encrustation and are useful in medical devices and urol. applications. The coating typically includes acidic chelating components, reactively bound to a hydrophilic **polyurethane** prepolymer along with noble metal combinations or **antibacterials**. The acidic and noble metal combinations can also be incorporated as additives during plastic molding of medical devices. Continuous **antibacterial** surfaces are provided by such coatings and materials.

ST encrustation resistance **antibacterial** coating medical application

IT Chelating agents  
(acidic; encrustation-resistant and **antibacterial** coatings for medical applications)

IT Coating materials  
(bactericidal, encrustation-resistant; encrustation-resistant and **antibacterial** coatings for medical applications)

IT Medical goods  
(coatings; encrustation-resistant and **antibacterial** coatings for medical applications)

IT **Antibacterial** agents  
(encrustation-resistant and **antibacterial** coatings for medical applications)

IT **Noble metals**  
RL: MOA (Modifier or additive use); USES (Uses)  
(encrustation-resistant and **antibacterial** coatings for medical applications)

IT **Polyurethanes, uses**  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(encrustation-resistant and **antibacterial** coatings for medical applications)

IT 60-00-4, EDTA, uses 67-43-6, DTPA 77-92-9, Citric acid, uses 102-29-4, Resorcinol monoacetate 107-35-7, Taurine 407-41-0 27754-99-0, Poly(vinyl phosphonic acid)  
RL: TEM (Technical or engineered material use); USES (Uses)  
(encrustation-resistant and **antibacterial** coatings for medical applications)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Neidrach; US 3798750 A 1974
- (2) Sakamoto; US 4642104 A 1987 HCAPLUS
- (3) Sarangapani; US 5328954 A 1994 HCAPLUS

L120 ANSWER 18 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:682179 HCAPLUS

DN 129:287544

ED Entered STN: 28 Oct 1998

TI Diagnostic devices and apparatus for the controlled movement of reagents without membranes

IN Buechler, Kenneth Francis

PA Biosite Diagnostics Inc., USA

SO PCT Int. Appl., 106 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM B01L003-00

ICS G01N035-00; G01N033-48; G01N033-50

CC 9-1 (Biochemical Methods)

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9843739	A2	19981008	WO 1998-US5681	19980324 <--
	WO 9843739	A3	20010607		
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				

US 6156270	A	20001205	US 1997-828041	19970327 <--
AU 9865790	A1	19981022	AU 1998-65790	19980324 <--
EP 1019193	A2	20000719	EP 1998-911959	19980324 <--
EP 1019193	B1	20030604		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, FI

JP 2001526778	T2	20011218	JP 1998-541728	19980324 <--
JP 3531941	B2	20040531		
AT 242054	E	20030615	AT 1998-911959	19980324 <--
PRAI US 1997-828041	A	19970327	<--	
US 1992-887526	A2	19920521	<--	
US 1993-65528	XX	19930519	<--	
US 1995-447895	A2	19950523	<--	
US 1995-447981	A2	19950523	<--	
WO 1998-US5681	W	19980324	<--	

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9843739	ICM	B01L003-00
	ICS	G01N035-00; G01N033-48; G01N033-50
WO 9843739	ECLA	B01L003/00C6C2; B01L003/00C6M; B29C065/08; G01N033/558; G01N035/00 <--
US 6156270	ECLA	B01J019/00R; B01L003/00C6C2; B01L003/00C6C; G01N033/543K; G01N033/558; G01N035/00 <--

AB The assay devices, assay systems and device components of this invention comprise at least two opposing surfaces disposed a capillary distance apart, at least one of which is capable of immobilizing at least one target ligand or a conjugate in an amount related to the presence or amount of target ligand in the sample from a fluid sample in a zone for controlled fluid movement to, through or away from the zone. The inventive device components may be incorporated into conventional assay devices with membranes or may be used in the inventive membrane-less devices herein described and claimed. These components include flow control elements, measurement elements, time gates, elements for the elimination of pipetting steps, and generally, elements for the controlled flow, timing, delivery, incubation, separation, washing and other steps of the assay process.

ST diagnostic device app reagent membrane

IT Polymers, uses

RL: DEV (Device component use); USES (Uses)

(Hydrophobic; diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Films

(Metalized; diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Diagnosis

(apparatus; diagnostic devices and apparatus for controlled movement of reagents

without membranes)

IT Polymers, uses

RL: DEV (Device component use); USES (Uses)

(co-; diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Apparatus

(diagnosis; diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Analytical apparatus

Ceramics

Immunoassay

**Laminated** materials

Latex

Membranes, nonbiological

Washing

(diagnostic devices and apparatus for controlled movement of reagents



without membranes)

IT Antibodies

Antigens

Carbohydrates, analysis

Ligands

Receptors

RL: ANT (Analyte); ANST (Analytical study)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Agglutinins and Lectins

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Avidins

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Reagents

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Acrylic polymers, uses

RL: DEV (Device component use); USES (Uses)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Fluoropolymers, uses

RL: DEV (Device component use); USES (Uses)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Fluoropolymers, uses

RL: DEV (Device component use); USES (Uses)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Glass, uses

RL: DEV (Device component use); USES (Uses)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Metals, uses

RL: DEV (Device component use); USES (Uses)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Plastics, uses

RL: DEV (Device component use); USES (Uses)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Polyamides, uses

RL: DEV (Device component use); USES (Uses)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Polycarbonates, uses

RL: DEV (Device component use); USES (Uses)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Polyesters, uses

RL: DEV (Device component use); USES (Uses)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Polyimides, uses

RL: DEV (Device component use); USES (Uses)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Polymer blends

RL: DEV (Device component use); USES (Uses)

(diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Polyolefins  
 RL: DEV (Device component use); USES (Uses)  
 (diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Polysiloxanes, uses  
 RL: DEV (Device component use); USES (Uses)  
 (diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Polyurethanes, uses  
 RL: DEV (Device component use); USES (Uses)  
 (diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Rubber, uses  
 RL: DEV (Device component use); USES (Uses)  
 (diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Foils  
 (metalized; diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Nucleotides, analysis  
 RL: ANT (Analyte); ANST (Analytical study)  
 (sequences, complementary; diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT Polymers, uses  
 RL: DEV (Device component use); USES (Uses)  
 (silicon-containing; diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT 58-85-5, Biotin  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT 100-42-5D, Styrene, polymers containing 105-57-7D, Acetal, copolymers and homopolymers 7440-21-3, Silicon, uses 7440-21-3D, Silicon, elastomers, uses 7440-22-4, Silver, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses 7704-34-9D, Sulfur, polymers containing, uses 7782-40-3, Diamond, uses 7782-50-5D, Chlorine, polymers containing, uses 9002-84-0, Teflon 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-53-6, Polystyrene latex 9004-70-0, Cellulose nitrate 9011-14-7, Polymethylmethacrylate  
 RL: DEV (Device component use); USES (Uses)  
 (diagnostic devices and apparatus for controlled movement of reagents without membranes)

IT 7440-22-4, Silver, uses 7440-50-8, Copper, uses 9002-84-0, Teflon  
 RL: DEV (Device component use); USES (Uses)  
 (diagnostic devices and apparatus for controlled movement of reagents without membranes)

RN 7440-22-4 HCAPLUS  
 CN Silver (8CI, 9CI) (CA INDEX NAME)

Ag

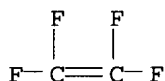
RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 9002-84-0 HCAPLUS  
CN Ethene, tetrafluoro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 116-14-3  
CMF C2 F4



L120 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:8069 HCAPLUS

DN 128:124558

ED Entered STN: 08 Jan 1998

TI New approaches to toxicity: a seven-gas predictive model and toxicant suppressants

AU Levin, Barbara C.

CS Biotechnology Division, National Institute of Standards and Technology, Gaithersburg, MD, 20899, USA

SO Drug and Chemical Toxicology (1977) (1997), 20(4), 271-280

CODEN: DCTODJ; ISSN: 0148-0545

PB Marcel Dekker, Inc.

DT Journal

LA English

CC 4-1 (Toxicology)

Section cross-reference(s): 59

AB Two new research approaches in combustion toxicol. are: 1. the prediction of smoke toxicity from math. equations, which are empirically derived from, expts. on the toxicol. interactions of complex fire gas mixts. and 2. the use of toxicant suppressants in materials or products to prevent the formation of toxic combustion products. The predictive approach consists of burning materials using a bench-scale method that simulates realistic fire conditions, measuring the concns. of the primary fire gases - CO, CO2, low O2, HCN, HCl, HBr, and NO2 - and predicting the toxicity of the smoke using either the 6- or 7-gas N-Gas Model. These models are based on the results of toxicol. studies of these primary gases as individual gases and as complex mixts. The predicted toxic potency is checked with a small number of animal (Fischer 344 male rats) tests to assure that an unanticipated toxic gas is not generated or an unexpected synergistic or antagonistic effect has not occurred. The results indicate if the smoke from a material or product is extremely toxic (based on mass consumed at the predicted toxic level) or unusually toxic (based on the gases deemed responsible). The predictions based on bench-scale laboratory tests have been validated with full-scale room burns of a limited number of materials of widely differing characteristics chosen to challenge the system. The advantages of this new approach are 1. the number of test animals is minimized by predicting the toxic potency from the chemical anal. of the smoke, 2. smoke may be produced under conditions that simulate the fire scenario of concern, 3. fewer tests are needed, thereby reducing the overall cost of the testing and 4. information is obtained on both the toxic potency of the smoke and the responsible gases. The N-gas models have been developed into the N-gas method (described in this paper) and these results have been used in computations of fire hazard. The 6-gas model is now part of the international standard ISO 13344 approved by 16 member countries of the international stds. organization (ISO) and is also included in the U.S. national standard ASTM E1678 approved by the American Society for Testing and Materials (ASTM). In addition, the 6-gas model is

used in the American National Standard-NFPA 269 - approved by the National Fire Protection Association (Quincy, MA). The second new research approach, toxicant suppressants, examines the potential of chemical compds., which when added to a material, to inhibit or reduce the concentration of a specific toxic gas normally generated during the material's thermal decomposition. The effectiveness of this approach was demonstrated at the National Institute of Stds. and Technol. (NIST) when HCN generation was reduced by 90% and the resultant toxicity of the combustion products was lowered by 50% when a flexible **polyurethane** foam (FPU) was treated with 0.1% (by weight) **cuprous** oxide (Cu<sub>2</sub>O). Although melamine-treated FPU foams are being promoted as more fire safe than standard foams, a melamine-treated foam generated 10 times more HCN than a foam without melamine. The addition of Cu<sub>2</sub>O to this melamine foam also reduced the HCN generation by 90%.

ST toxicity gas predictive model toxicant suppressant

IT **Polyurethanes, biological studies**

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(foam; new approaches to toxicity - a seven-gas predictive model and toxicant suppressants)

IT **Toxicants**

**Toxicants**

(gaseous; new approaches to toxicity - a seven-gas predictive model and toxicant suppressants)

IT Fire

Hypoxia, animal

Smoke

Toxicity

(new approaches to toxicity - a seven-gas predictive model and toxicant suppressants)

IT Simulation and Modeling, biological

(predictive model; new approaches to toxicity - a seven-gas predictive model and toxicant suppressants)

IT **Toxicants**

(suppressants; new approaches to toxicity - a seven-gas predictive model and toxicant suppressants)

IT Gases

Gases

(toxic; new approaches to toxicity - a seven-gas predictive model and toxicant suppressants)

IT 74-90-8, Hydrocyanic acid, biological studies 124-38-9, Carbon dioxide, biological studies 630-08-0, Carbon monoxide, biological studies 7647-01-0, Hydrochloric acid, biological studies 10035-10-6, Hydrobromic acid, biological studies 10102-44-0, Nitrogen dioxide, biological studies

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (new approaches to toxicity - a seven-gas predictive model and toxicant suppressants)

IT 108-78-1, Melamine, biological studies 1317-39-1, **Cuprous** oxide, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(new approaches to toxicity - a seven-gas predictive model and toxicant suppressants)

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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(2) Babrauskas, V; NIST Technical Note 1284 1991

(3) Babrauskas, V; Toxic Potency Measurement for Fire Hazard Analysis 1991

(4) Braun, E; Fire Toxicity Scaling 1987, NBSIR 87-3510

(5) Braun, E; J Fire Sciences 1990, V8, P63 HCAPLUS

(6) Braun, E; Large-Scale Compartment Fire Toxicity Study: Comparison with Small-Scale Toxicity Test Results 1988, NBSIR 88-3764

(7) Hartzell, G; "Fire and Polymers: Hazards Identification and Prevention", ACS

- Symposium Series 425 1990, P12 HCAPLUS
- (8) Jellinek, H; J Polymer Sci 1978, V10, P253 HCAPLUS
  - (9) Levin, B; "The Proceedings of the Fire Retardant Chemicals Association Fall Conference" Scottsdale 1989, AR, 107-112
  - (10) Levin, B; Chapter 20, ACS Symposium Series 599, "Fire and Polymers II" 1995, P293 HCAPLUS
  - (11) Levin, B; Effects of Combustion Conditions and Scaling on the Generation of Hydrogen Cyanide and Toxicity from Flexible Polyurethane Foam with and without Copper Compounds 1992, NISTIR 4989
  - (12) Levin, B; Fire and Materials 1985, V9, P125 HCAPLUS
  - (13) Levin, B; First Annual Report to the International Copper Research Association, Inc from the National Institute of Standards and Technology 1988
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  - (15) Levin, B; Further Development of a Test Method for the Assessment of the Acute Inhalation Toxicity of Combustion Products 1982
  - (16) Levin, B; Journal of Research of the National Institute of Standards and Technology 1991, V96, P741 HCAPLUS
  - (17) Levin, B; Polyurethane '88, Proceedings 31st Soc of Plastics Meeting 1988, P249 HCAPLUS
  - (18) Levin, B; Proceedings of the Ninth Joint Panel Meeting of the U S-Japan (UJNR) Panel on Fire Research and Safety 1988, NBSIR 88-3753
  - (19) Levin, B; Second Annual Report to the International Copper Association, Ltd from the National Institute of Standards and Technology 1989
  - (20) Levin, B; Synergistic Effects of Nitrogen Dioxide and Carbon Dioxide Following Acute Inhalation Exposures in Rats 1989, NISTIR 89-4105
  - (21) Levin, B; The Effect of Copper Additives on the Flammability Characteristics of Flexible Polyurethane Foam 1990, NISTIR 4441
  - (22) Levin, B; The Toxicologist 1985, V5, P127
  - (23) Levin, B; The Toxicologist 1991, V11, P222
  - (24) Levin, B; Toxicology 1987, V47, P135 HCAPLUS
  - (25) Levin, B; Toxicology 1996, V115, P89 HCAPLUS
  - (26) Levin, B; Toxicology Letters 1992, V64/65, P257
  - (27) Switzer, W; Personal communication
  - (28) Weil, E; J Fire Sci 1995, V13, P104 HCAPLUS

L120 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1994:686661 HCAPLUS

DN 121:286661

ED Entered STN: 10 Dec 1994

TI Encrusting and bacterial resistant coatings for medical applications

IN Sarangapani, Shantha

PA ICET, Inc., USA

SO U.S., 20 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM C08L075-00

NCL 524589000

CC 63-7 (Pharmaceuticals)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5328954	A	19940712	US 1993-48489	19930416
	WO 9424181	A1	19941027	WO 1994-US4107	19940414
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9467044	A1	19941108	AU 1994-67044	19940414
PRAI	US 1993-48489		19930416		
	WO 1994-US4107		19940414		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

US 5328954 ICM C08L075-00  
NCL 524589000

AB Disclosed is an encrustation and bacterial-resistant coating for use on medical devices and in other medical-related applications. The coating includes a reaction product formed by the covalent linkage of a hydrophilic **polyurethane** prepolymer and aminopolycarboxylic acid. A urease inhibitor and/or an antibacterial agent may also be added to the coating. Examples include reaction products of Hypol 5000 with EDTA, resorcinol monoacetate, Nitroxolin, or iminodiacetic acid.

ST medical coating **polyurethane** aminocarboxylic acid

IT Bactericides, Disinfectants, and Antiseptics  
Medical goods  
(encrusting and bacterial resistant coatings for medical applications)

IT Medical goods  
(catheters, encrusting and bacterial resistant coatings for medical applications)

IT Lenses  
(contact, encrusting and bacterial resistant coatings for medical applications)

IT Amino acids, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(polycarboxylic, encrusting and bacterial resistant coatings for medical applications)

IT **Urethane polymers**, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(reaction products, with aminopolycarboxylic acids; encrusting and bacterial resistant coatings for medical applications)

IT 108-77-0, Cyanuric chloride 506-68-3, Cyanogen bromide  
RL: CAT (Catalyst use); USES (Uses)  
(encrusting and bacterial resistant coatings for medical applications)

IT 60-00-4DP, EDTA, reaction products with Hypol 102-29-4DP, Resorcinol monoacetate, reaction products with Hypol 142-73-4DP, Iminodiacetic acid, reaction products with Hypol 4008-48-4DP, Nitroxolin, reaction products with Hypol 88385-51-7DP, Hypol 5000, reaction products with aminopolycarboxylic acids  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(encrusting and bacterial resistant coatings for medical applications)

IT 1939-36-2D, reaction products with Hypol  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(encrusting and bacterial resistant coatings for medical applications)

IT 9002-13-5, Urease  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(inhibitors; encrusting and bacterial resistant coatings for medical applications)

L120 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1994:212037 HCAPLUS

DN 120:212037

ED Entered STN: 30 Apr 1994

TI Immobilization of biomolecules on perfluorocarbon surfaces

IN Eveleigh, John W. D.

PA du Pont de Nemours, E. I., and Co., USA

SO U.S., 8 pp. Cont.-in-part of U.S. Ser. No. 428,154, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC ICM C12N011-06

ICS C12N011-08; G01N033-549; G01N033-545

NCL 435181000

CC 9-5 (Biochemical Methods)

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

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PI    US 5270193      A      19931214      US 1991-785887      19911024 <--
PRAI  US 1989-428154      19891027 <--
CLASS

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PATENT NO.      CLASS  PATENT FAMILY CLASSIFICATION CODES
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US 5270193      ICM    C12N011-06
                  ICS    C12N011-08; G01N033-549; G01N033-545
                  NCL    435181000
AB  A ligand or ligand receptor is securely but reversibly attached to a
perfluorocarbon carrier with a water-soluble polymer, a perfluorocarbon
anchoring group, and optionally a linker. For example, the biomol. is
covalently attached to the polymer, followed by covalently attaching the
anchoring group and attaching the product to the carrier. Alternatively,
the anchoring group is covalently attached to the polymer, followed by
attachment of the product to the carrier and then covalently attaching a
biomol. to the polymer. The polymer may be starch, dextran, agarose, PEG,
or poly(vinyl alc.). The immobilized ligand
or receptor is useful in affinity sepns. and immunoassays. Thus, the
triazine dye, Procion Red H-3B, was conjugated with poly(
vinyl alc.) in aqueous solution, and the conjugate was acylated
with pentafluorobenzoyl chloride and adsorbed onto a Perflex 35S solid
perfluorocarbon chromatog. carrier. A column packed with the dye-bearing
carrier was used for chromatog. purification of crude muscle lactate
dehydrogenase (purification factor 4.8, recovery 71%).
ST  ligand immobilization perfluorocarbon; receptor immobilization
perfluorocarbon; dye immobilization perfluorocarbon; enzyme chromatog dye
immobilization perfluorocarbon
IT  Albumins, preparation
    RL: ANT (Analyte); ANST (Analytical study)
        (chromatog. of, on perfluorocarbon-immobilized triazine dye)
IT  Ligands
    Receptors
    RL: PROC (Process)
        (immobilization of, on perfluorocarbon carrier)
IT  Dyes
    Antibodies
        Antigens
    Coenzymes
    Enzymes
    Haptens
    Nucleic acids
    Vitamins
    RL: ANST (Analytical study)
        (immobilization of, on perfluorocarbons, perfluoro anchoring group and
        water-soluble polymer in)
IT  Linking agents
    (in ligand or receptor immobilization on perfluorocarbons)
IT  Perfluorocarbons
    RL: ANST (Analytical study)
        (ligand or receptor immobilization on)
IT  Immobilization, biochemical
    (of ligand or receptor, on perfluorocarbon, perfluoro anchoring group
    and water-soluble polymer in)
IT  Proteins, specific or class
    RL: ANST (Analytical study)
        (A, immobilization of, on perfluorocarbon, perfluoro anchoring group
        and water-soluble polymer in)
IT  Perfluoro compounds
    RL: ANST (Analytical study)
        (acid chlorides, in ligand or receptor immobilization on
        perfluorocarbons)
IT  Polymers, compounds

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- RL: ANST (Analytical study)  
(conjugates, water-soluble, with ligand or receptor, immobilization of, on perfluorocarbon)
- IT Proteins, specific or class  
RL: ANST (Analytical study)  
(ligand-binding, immobilization of, on perfluorocarbons, perfluoro anchoring group and water-soluble polymer in)
- IT Acid chlorides  
Anhydrides  
RL: ANST (Analytical study)  
(perfluoro, in ligand or receptor immobilization on perfluorocarbons)
- IT 9001-60-9, Lactate dehydrogenase  
RL: ANT (Analyte); ANST (Analytical study)  
(chromatog. of, on perfluorocarbon-immobilized triazine dye)
- IT 7440-50-8, Copper, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(complexation of, by perfluorocarbon-immobilized dye-iminodiacetic acid conjugate)
- IT 9002-89-5D, Poly(vinyl alcohol),  
conjugates with ligand or receptor 9002-89-5D, Poly(vinyl alcohol), conjugates with perfluorobenzoyl chloride and triazine dye 9004-54-0D, Dextran, conjugates with ligand or receptor 9005-25-8D, Starch, conjugates with ligand or receptor 9012-36-6D, Agarose, conjugates with ligand or receptor  
RL: PROC (Process)  
(immobilization of, on perfluorocarbon)
- IT 108-77-0, Trichloro-s-triazine 12236-82-7, Procion Blue H-B  
23211-47-4, Procion Red H-3B  
RL: ANST (Analytical study)  
(immobilization of, on perfluorocarbon, perfluoro anchoring group and water-soluble polymer in)
- IT 23211-47-4D, Procion Red H-3B, poly(vinyl alc  
. ) conjugates  
RL: PROC (Process)  
(immobilization of, on perfluorocarbon, perfluoro anchoring group in)
- IT 108-77-0D, Trichloro-s-triazine, condensation products with iminodiacetic acid 142-73-4D, Iminodiacetic acid, condensation products with trichlorotriazine  
RL: ANST (Analytical study)  
(immobilized on perfluorocarbon, copper binding by)
- IT 58-68-4, NADH  
RL: ANST (Analytical study)  
(in lactate dehydrogenase chromatog. on perfluorocarbon-immobilized triazine dye)
- IT 75-13-8D, Isocyanic acid, esters, perfluoro 288-32-4D, 1H-Imidazole, 1-acyl derivs., perfluoro  
RL: ANST (Analytical study)  
(in ligand or receptor immobilization on perfluorocarbons)
- IT 2251-50-5, Pentafluorobenzoyl chloride  
RL: ANST (Analytical study)  
(in triazine dye immobilization on perfluorocarbon carrier)
- IT 306-94-5, Perfluorodecalin 9002-84-0, Poly(tetrafluoroethylene) 24937-79-9, Poly(vinylidene fluoride) 24981-14-4, Poly(vinyl fluoride)  
RL: ANST (Analytical study)  
(ligand or receptor immobilization on)
- IT 153967-01-2, Perfex 35S  
RL: ANST (Analytical study)  
(triazine dye immobilization on, perfluoro anchoring group and water-soluble polymer in)
- IT 7440-50-8, Copper, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(complexation of, by perfluorocarbon-immobilized dye-iminodiacetic acid



conjugate)  
 RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT 9002-89-5D, Poly(vinyl alcohol),  
 conjugates with ligand or receptor  
 RL: PROC (Process)  
 (immobilization of, on perfluorocarbon)  
 RN 9002-89-5 HCAPLUS  
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

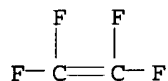
CRN 557-75-5  
 CMF C2 H4 O

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IT 9002-84-0, Poly(tetrafluoroethylene)  
 RL: ANST (Analytical study)  
 (ligand or receptor immobilization on)  
 RN 9002-84-0 HCAPLUS  
 CN Ethene, tetrafluoro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 116-14-3  
 CMF C2 F4



L120 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1990:218347 HCAPLUS

DN 112:218347

ED Entered STN: 09 Jun 1990

TI Poly(tetrafluoroethylene) composite membrane for  
 chemical warfare gas sensors

IN Mallouk, Robert S.; Branca, Phillip A.

PA Gore, W. L., and Associates, Inc., USA

SO PCT Int. Appl., 16 pp.

CODEN: PIXXD2

DT Patent

LA English

IC B01D013-04; G01N033-07

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 80

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 8912490	A2	19891228	WO 1989-US2617	19890615
	WO 8912490	A3	19900125		
	W: AU, JP				

RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE  
 US 4902308 A 19900220 US 1988-206884 19880615  
 AU 8942026 A1 19900112 AU 1989-42026 19890615  
 EP 419579 A1 19910403 EP 1989-910035 19890615  
 EP 419579 B1 19921028  
 R: DE, FR, GB, IT, SE  
 JP 03502425 T2 19910606 JP 1989-509527 19890615  
 JP 06067462 B4 19940831  
 PRAI US 1988-206884 19880615  
 WO 1989-US2617 19890615

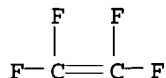
## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 8912490	IC	B01D013-04IC G01N033-07
AB	A porous composite membrane, useful as a scavenger of unwanted gas components which cause false-pos. detection of organic nerve gas agents in sensors, comprises a film of porous, expanded <b>poly(tetrafluoroethylene)</b> (I) whose surfaces, both exterior and within its pores, are coated with a metal salt of a perfluoro cation exchanger. Thus, an expanded I membrane substrate was coated with perfluorosulfonic acid polymer (II) solution in EtOH, dried, placed in a polypropylene frame, wetted with aqueous iso-PROH, and treated with AgNO <sub>3</sub> to cause <b>Ag</b> exchange. The dried <b>Ag</b> -exchanged I-II membrane was placed into gas sensors and tested for effectiveness against 10 ppm HCN showing 31-110% increase in lifetime compared to the control ( <b>Ag</b> -exchanged Gelman SA 6404 membrane).	
ST	<b>polytetrafluoroethylene</b> expanded composite membrane; polyperfluorosulfonic acid <b>PTFE</b> membrane; <b>silver</b> ion polyperfluorosulfonic acid membrane; gas sensor <b>PTFE</b> composite membrane; scavenger gas sensor membrane; nerve gas sensor <b>PTFE</b> membrane	
IT	Cation exchangers (perfluoro, salts, composites with expanded <b>PTFE</b> , membranes, for organic nerve gas sensors)	
IT	<b>Chemical warfare agents</b> (nerve gases, organic, sensors for, porous composite membranes for, long-life)	
IT	127195-72-6 RL: USES (Uses) (composites with expanded <b>PTFE</b> , membranes, for organic nerve gas sensors)	
IT	<b>9002-84-0, Poly(tetrafluoroethylene)</b> RL: USES (Uses) (expanded, membranes, composite, for organic nerve gas sensors)	
IT	<b>9002-84-0, Poly(tetrafluoroethylene)</b> RL: USES (Uses) (expanded, membranes, composite, for organic nerve gas sensors)	
RN	<b>9002-84-0 HCAPLUS</b>	
CN	Ethene, tetrafluoro-, homopolymer (9CI) (CA INDEX NAME)	

CM 1

CRN 116-14-3

CMF C2 F4



AN 1982:587379 HCAPLUS  
DN 97:187379  
ED Entered STN: 12 May 1984  
TI Adsorption of mercury vapor by indoor surfaces  
AU Spedding, D. J.; Hamilton, R. B.  
CS Chem. Dep., Univ. Auckland, Auckland, N. Z.  
SO Environmental Research (1982), 29(1), 30-41  
CODEN: ENVRAL; ISSN: 0013-9351  
DT Journal  
LA English  
CC 59-2 (Air Pollution and Industrial Hygiene)  
AB The adsorption of Hg vapor by a variety of indoor surfaces has been measured in the laboratory using 203Hg. The highest sorption occurred on a PVC-based flooring material followed by water-based paint surfaces and oil-based paint surfaces. An investigation of the kinetics of adsorption indicated that Hg vapor is poorly sorbed by solid nonliving surfaces in a manner suggesting very weak interactions with the surface. Desorption rates for surface-adsorbed Hg were obtained and used in a model room situation to evaluate the contribution of Hg from this source to its vapor concentration in a contaminated indoor environment.  
ST mercury adsorption indoor surface  
IT **Air pollution**  
(by mercury desorption from indoor surface)  
IT Polyester fibers, properties  
RL: PRP (Properties)  
(fabrics, dsorption on and desorption from indoor surface of)  
IT Carpets  
(mercury adsorption on and desorption from indoor surface of)  
IT Galvanized iron and steel  
Glass, oxide  
RL: PRP (Properties)  
(mercury adsorption on and desorption from indoor surface of)  
IT Adsorption  
(of mercury by indoor surfaces)  
IT Desorption  
(of mercury from indoor surface)  
IT Polyesters, properties  
Rayon, properties  
(fabric, mercury adsorption on and desorption from indoor surface of)  
IT Coating materials  
(paint, mercury adsorption on and desorption from indoor surface of)  
IT Coating materials  
(paraffin wax, mercury adsorption on and desorption from indoor surface of)  
IT Building materials  
(particle board, mercury adsorption on and desorption from indoor surface of)  
IT Coating materials  
(polyurethane, mercury adsorption on and desorption from indoor surface of)  
IT Cotton  
(textile, mercury adsorption on and desorption from indoor surface of)  
IT Paper  
(wall-, mercury adsorption on and desorption from indoor surface of)  
IT 7439-97-6, properties  
RL: PRP (Properties)  
(adsorption and desorption of, on and from indoor surfaces)  
IT 7429-90-5, properties 7440-50-8, properties 9002-86-2  
9002-88-4 9011-14-7 12597-69-2, properties  
RL: PRP (Properties)  
(mercury adsorption on and desorption from indoor surface of)  
IT 7440-50-8, properties  
RL: PRP (Properties)

(mercury adsorption on and desorption from indoor surface of)

RN 7440-50-8 HCAPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

L120 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1975:481065 HCAPLUS

DN 83:81065

ED Entered STN: 12 May 1984

TI Fireproofing of **fibers**

IN Tsumori, Takaya; Ikegami, Yoshitaka; Tsukazoe, Kiyoharu; Fukatsu, Kazuhiko; Okabe, Yukari

PA Kohjin Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

NCL 42D23; 42D22; 25(1)C121.83

CC 39-2 (Textiles)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 50024531	A2	19750315	JP 1973-75661	19730706 <--
	JP 52006371	B4	19770222		
PRAI	JP 1973-75661		19730706	<--	

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

JP 50024531 NCL 42D23

AB Impregnation of **fibers** spun from blends of **poly(vinyl alc.)** (I) containing  $\geq 10$  weight% of a halogen-containing polymer with a composition containing **Zn** [7440-66-6] or a **Zn** compound so as to give **fibers** containing 0.1-15 weight% **Zn** gives finished **fibers** or products; and optionally spinning a mixture of I containing  $\geq 10$  weight% of a halogen-containing polymer and **Zn** or **Zn** compds. [0.1-15 weight% (based on **fibers**) **Zn**] gives **fibers**.  
The purpose of the **Zn** compound is to reduce smoke emission (HCl) during combustion. Thus, a fabric (prepared from **fibers** spun from a blend of PVC and partially acetalized I at 40:60 weight ratio) was immersed in an aqueous mixture containing 5 weight% **Zn(NO<sub>3</sub>)<sub>2</sub>** [7779-88-6] for 2 min, padded [5 weight% **Zn(NO<sub>3</sub>)<sub>2</sub>**], and dried to give a fabric. On burning the resulting fabric the amount of smoke evolved was 60 weight% less than that obtained from the untreated fabric. Poly(vinylidene chloride) [9002-85-1] and **ZnO** [1314-13-2] were also used.

ST PVC vinal **fiber** fireproofing; safety fabric combustion;  
**zinc** smoke redn agent fabric

IT **Health hazard**  
(from smoke of vinal-vinyon fabric combustion, **zinc** compound treatment for amelioration of)

IT Smoke  
(inhibitors of, **zinc** compds. as, for vinal-vinyon blend **fibers**)

IT Vinyon **fibers**  
RL: USES (Uses)  
(**poly(vinyl alc.)**-containing **zinc** compound treatment of, for smoke reduction during combustion)

IT Vinal **fibers**  
RL: USES (Uses)

(vinyl halide polymer-containing, **zinc** compound treatment of, for  
smoke reduction during combustion)

IT 9002-85-1  
RL: USES (Uses)  
(**fiber**, containing PVC and **poly(vinyl  
alc.)**, **zinc** compound treatment of, for smoke reduction  
during combustion)

IT 1314-13-2, uses and miscellaneous 7779-88-6  
RL: USES (Uses)  
(smoke control agents, for PVC-vinal **fibers**)

IT 7440-66-6, uses and miscellaneous  
RL: USES (Uses)  
(smoke control agents, for poly(vinyl halide)-vinal **fibers**)

IT 7440-66-6, uses and miscellaneous  
RL: USES (Uses)  
(smoke control agents, for poly(vinyl halide)-vinal **fibers**)

RN 7440-66-6 HCAPLUS  
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

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